ON THE DIPTERA OF NEPAL (STRATIOMYIDAE, THEREVIDAE AND DOLICHOPODIDAE)

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SYNOPSIS

Published and new records of Stratiomyidae, Therevidae and Dolichopodidae from Nepal are given. 2 new species of Therevidae ; 1 new genus, 22 new species (including 1 from Tibet) and 1 new subspecies of Dolichopodidae are described.

INTRODUCTION

The dipterous fauna of Nepal is poorly known and this paper attempts to bring up to date both published and new records of Stratiomyidae, Therevidae and Dolichopodidae from this country.

The work was stimulated by the collections of two British Museum expeditions to Nepal. On the first expedition, in 1954, the Diptera were collected by Mr. J. Quinlan. The second expedition, during the winter of 1961–62, provided the bulk of material studied and this collection was made by Mr. R. L. Coe.

One new species, *Hercostomus kaulbacki* sp. n. from Tibet is described here because of the proximity of the locality and the unusual characteristics displayed by the fly.

A full bibliography of the recorded species is not given and only references to taxonomic changes and new locality records are stated.

Unless otherwise stated all type material is in the British Museum (Natural History).

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STRATIOMYIDAE

Brunetti (1923), in his revision of the Oriental Stratiomyidae, records many species from Darjeeling and nearby districts, but in this and other relevant papers there is no record of Stratiomyidae from Nepal.

In the British Museum collection one species is represented from the area.

Ptecticus melanurus (Walker)

Ctenophora melanura Walker, 1848 : 78.
Ptecticus apicalis Loew, 1855 : 142.
Sargus luridus Walker, 1856 : 8.
Sargus leoninus Rondani, 1875 : 454.
Sargus melanurus (Walker) Osten Sacken, 1886 : 166.
Ptecticus aurifer Brunetti (nec Walker), 1920 : 78.
Ptecticus melanurus (Walker) Brunetti, 1923 : 138.

4 ♂, NEPAL : Taplejung Distr., Sangu, c. 6,200′, mixed vegetation by stream in gully, ix–x.1961 ; 8 ♂, flying into pit latrine ; 1 ♂, xi.1961–i.1962 (*R. L. Coe*).

THEREVIDAE

As far as can be gathered there are no previous records of Therevidae from Nepal.

Two apparently undescribed species of this family are present in the British Museum collection.

Thereva hinu sp. n.

(Text-figs. 1–6)

♂. Eyes contiguous over upper frons ; lower frons grey dusted with long, straight, intermingled grey and black hairs. Antennae grey-black and bearing silver and black hairs and black bristles. Face grey, thickly covered with long silver and black hairs. Occiput grey with a post-ocular fringe of long black hair-like bristles and a uniform covering of long silver hairs ventrally.

Dorsum of thorax grey with 3 vague brown longitudinal stripes and a uniform covering of thin black hairs ; 3 pre-sutural, 1 sutural, 2 supra-alar and 1 post-alar bristle present. Scutellum concolorous with dorsum with 4 marginal bristles and some long dark hairs. Pleurae grey, densely covered with long silver hairs.

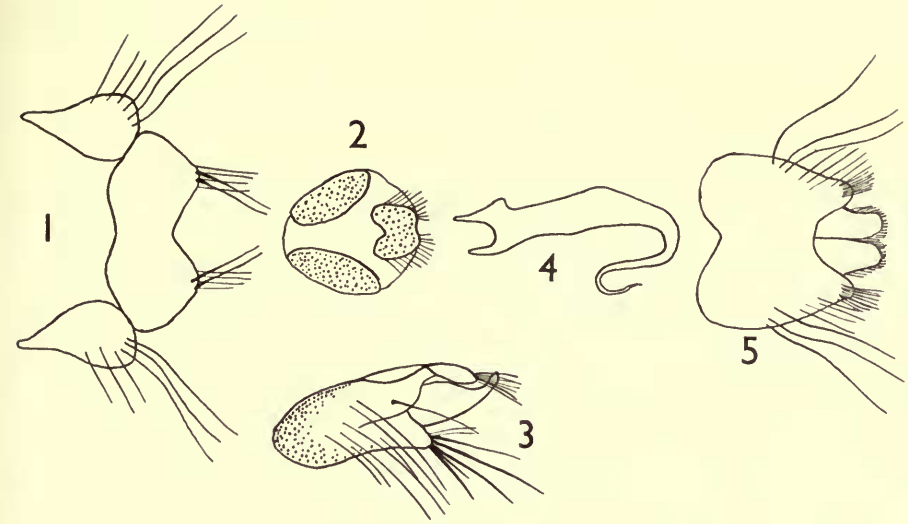
Abdomen shining dark grey-black with lateral and posterior margins of tergites grey dusted ; mixed pale and dark hairs dorsally but only pale hairs laterally and ventrally. Genitalia with lateral lamellae orange, penis S-shaped.

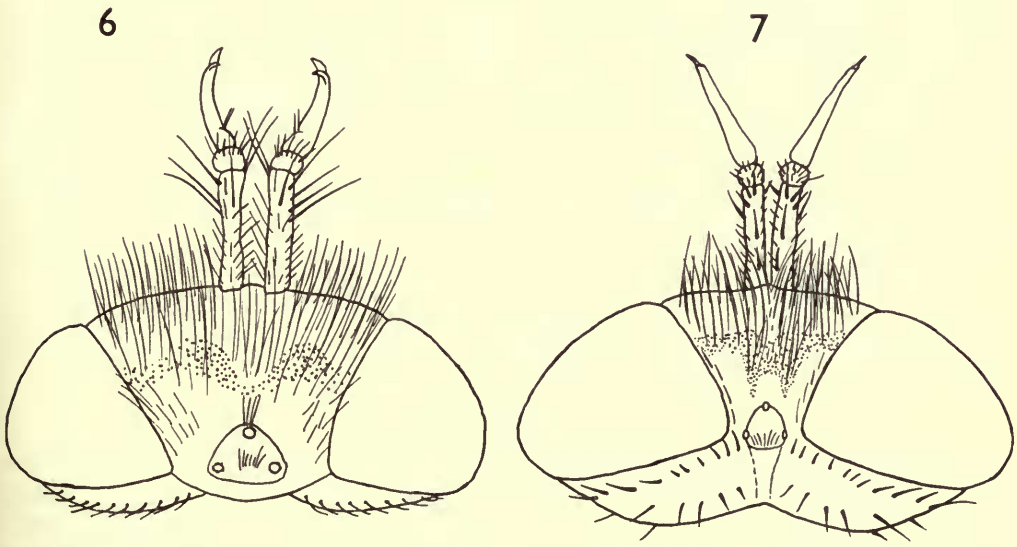
Legs with coxae dark grey and long pale haired, posterior pair with 1 external black bristle. Femora grey with long silvery hairs ; posterior pair with a few black bristles ventrally. Tibiae orange with darkened tips and black bristles. Tarsi mainly black, basitarsi orange in basal half.

Wings clear hyaline with a weak brown stigma, 4th posterior cell closed. Halteres dark.

♀ much more sparsely haired than ♂. Eyes separated over frons which is one-third width of head at its narrowest and widens to almost twice this width just above antennae. Frontal callosities represented by a broad irregular band of darker pigment. Post-ocular fringe shorter than in ♂ and more bristle-like.

Length, 8 mm.





FIGS. 1–7. *Thereva* spp., *T. hinu* sp. n. 1–5. ♂ genitalia. 1. sub-apical sternite. 2. apical sternite. 3. lateral lamella. 4. phallobase and aedeagus. 5. apical tergite. 6. ♀ head, dorsal aspect : *T. brunettii* sp. n. 7. ♀ head, dorsal aspect.

Holotype ♂, NEPAL : Taplejung Distr., damp evergreen oak forest above Sangu, c. 10,400′, 2–26.xi.1961, resting on stones in clearing (*R. L. Coe*).

Paratypes, 7 ♂, 1 ♀, same data as Holotype.

This species does not seem to be related to the known Oriental species of *Thereva*. Of the Palaearctic species, *innotata* Krober (1912), described from Turkestan, is

close but may be distinguished by the orange colour of the 2nd antennal segment and base of the 3rd, and the brown-black thorax bearing 2 yellow-grey, longitudinal stripes.

Thereva brunettii sp. n.

(Text-fig. 7)

♀. Frons about one-sixth width of head at narrowest part and widening to over twice its original width above antennae ; orange-grey dusted with a trapezoid area of dark pigment extending to inner eye margins below ocellar triangle, light and dark haired. Antennae with 1st segment grey, pale haired and with black bristles sub-apically ; 2nd segment and base of 3rd reddish, remainder of 3rd segment grey-black. Face whitish-grey, long pale haired. Proboscis orange-brown. Occiput convex, grey, with upper post-ocular cilia black and ventrally with dense pale hairs ; a few black bristles below post-ocular row.

Thorax dorsally grey-brown with short pale and dark hairs ; no definite longitudinal stripes but 2 vague, brown lines show laterally ; 1–2 pre-sutural, 2 sutural, 2 supra-alar and 1 post-alar bristle. Scutellum concolorous with dorsum, with 4 black marginal bristles and an even covering of shorter pale hairs. Pleurae grey, pale haired.

Abdomen with tergites shining brown-black with yellow dusting on posterior margins, the colour widening laterally ; evenly covered with short golden hairs.

Legs with coxae grey, white haired and with black apical bristles. Femora dark brown-black, white haired, posterior pair with an antero-ventral row of 4–5 short, brown-black bristles sub-apically. Tibiae orange-yellow, brown apically, brown bristled ; anterior pair with 2 antero-dorsal, 2 postero-dorsal, 2 antero-ventral and 2 postero-ventral bristles. Anterior and middle basitarsi orange, following tarsal segments and all posterior tarsal segments brown-black.

Wings pale yellow-brown hyaline, stigma yellow ; 4th posterior cell closed.

♂ unknown.

Length, 10–13 mm.

Holotype ♀, Nepal : Taplejung Distr., old mixed forest above Sangu, c. 6,200′, 25–28.x.1961 (*R. L. Coe*).

Paratypes 2 ♀, India : Darjeeling, 10.x.1920 and 8.xi.1920, Pres. E. Brunetti.

T. bilineata Brunetti (1920), described from N. India, is close to *brunettii* sp. n. but may be distinguished by the much wider frons, completely dark antennae and 2 clear yellowish white stripes on the dorsum of the thorax.

DOLICHOPODIDAE

To the best of my knowledge only 4 species have previously been recorded from Nepal : *Tachytrechus crassitarsis* de Meijere, 1916, recorded by Becker (1922) ; *Sympycnus gummigutti* Becker, 1922, described from Nepal ; *Diaphorus mandarinus* Wiedemann, 1830, and *Thinophilus indigenus* Becker, 1903. The two latter species were recorded by Ribeiro (1923) in his amendments to the localities in Becker (1922).

None of these species was represented in the British Museum collections which included 27 species and 1 subspecies in 12 genera. The list of species recorded from Nepal now stands as :—

CHRYSOSOMATINAE

Sciopus pediformis Becker, 1922

DOLICHOPODINAE

Dolichopus angustinervis Becker, 1922
Hercostomus ulleriensis sp. n.
H. phollae sp. n.
Tachytrechus crassitarsis de Meijere, 1916
T. compositus sp. n.

HYDROPHORINAE

Thinophilus indigenus Becker, 1903

DIAPHORINAE

Diaphorus mandarinus Wiedemann, 1830
D. jeanae sp. n.
D. sanguensis sp. n.
Chrysotus discretus Becker, 1922
C. pseudocilipes sp. n.
C. kholsa sp. n.
Argyra pseudosuperba sp. n.

RHAPHIINAE

Syntormon dukha sp. n.
S. babu sp. n.
S. ama sp. n.

CAMPSICNEMINAE

Micromorphus albipes (Zetterstedt, 1843)
Sympycnus gummigutti Becker, 1922
S. coei sp. n.
S. arunensis sp. n.
S. albipes nepalensis subsp. n.
S. laetus Becker, 1922
S. khola sp. n.
S. turbidus Becker, 1922
S. peniculitarsus sp. n.
S. gauri sp. n.
S. takagii sp. n.
S. pahar sp. n.
Chrysotimus anomalicerus sp. n.
Nepalomyia dytei gen. and sp. n.
N. confusa sp. n.

This species list cannot be taken as complete as most of the specimens studied were collected from East Nepal in the winter months and very little is known of the summer fauna and that of the more north-westerly region of the country.

As is to be expected the Dolichopodid fauna of Nepal is mainly Oriental with little influence from the Palaearctic region. It is, however, interesting that many species, especially in the Campsicneminae, show relationships with the faunas of Ceylon, Indonesia, Formosa and the Philippines, and the only subspecies described shows a direct link through Ceylon with other islands in the Indian Ocean. The Himalayan Region would therefore seem to be a meeting point for several lines of distribution in the Oriental Region.

The predominance of Campsicneminae in the recorded species may not be a true reflection of the Dolichopodid fauna of Nepal as much of the collecting was carried out in deep gullies with low vegetation.

Key to the Genera known from the Himalayan Region

Those genera in parentheses are not recorded from Nepal.

1 4th long vein forked ; thorax not longer than wide ; vertex sunken on either side of a prominent ocellar triangle ; abdomen long and thin, hypopygium pedunculate . 2
– 4th long vein not forked ; thorax longer than wide ; vertex not deeply sunken between upper eye margins 6
2 In the ♂ no definite joint between arista and 3rd antennal segment thus forming a compound structure which is flattened dorso-ventrally, shiny above and with a triangular patch of short hairs below ; 1st antennal segment with a bulbous projection below . . . . . (***Megistostylus*** Bigot)
– Arista clearly demarked from 3rd antennal segment or at least not as above . . 3
3 Arista apical . . . . . (***Chrysosoma*** Guérin)
– Arista dorsal 4
4 4 scutellar bristles ; acrostical bristles at least as strong as dorso-centrals . (***Condylostylus*** Bigot, *sensu* Becker)
– 2 scutellar bristles ; acrosticals weaker than dorso-centrals 5
5 3rd antennal segment short triangular, normally not longer than wide ***Sciopus*** Zeller
– 3rd antennal segment long triangular, almost twice as long as wide (***Megistostylus*** Bigot ♀)

6 2nd antennal segment produced thumb-like into 3rd antennal segment on inner surface ; pteropleura often haired . . . . . ***Syntormon*** Loew
– 2nd antennal segment transverse or at most produced dorsally over 3rd antennal segment 7
7 1st antennal segment haired on dorsal surface 8
– 1st antennal segment bare on dorsal surface 11
8 Hind coxa with a vertical row of hairs on external surface ; many prothoracic hairs ***Argyra*** Macquart
– Hind coxa with a single external bristle ; 1 prothoracic bristle 9
9 Hind basitarsus bristled on dorsal surface . . . . . ***Dolichopus*** Latreille
– Hind basitarsus without bristles on dorsal surface 10
10 Clypeus detached from inner eye margins ; face extending almost to level of lower eye margins ; hind femur with a pre-apico-dorsal row of bristles ***Tachytrechus*** Walker
– Clypeus not detached from inner eye margins ; face not extending down to level of lower eye margins ; hind femur with external pre-apical bristles . ***Hercostomus*** Loew
11 Face with a complete transverse division 12
– Face with, at most, an incomplete transverse division 14
12 Thorax with a pre-scutellar flattening ; acrosticals biserial ; arista sub-apical or apical ; hypopygium pedunculate . . . . . (***Medetera*** Fischer)
– Thorax without a pre-scutellar flattening ; acrosticals uniserial or absent ; arista dorsal ; hypopygium enclosed 13
13 Acrosticals uniserial ; 4 or more scutellar bristles . . . (***Hydrophorus*** Fallen)
– Acrosticals absent ; 2 scutellar bristles . . . . . ***Thinophilus*** Wahlberg
14 Thorax with a strong pre-scutellar flattening ; hypopygium free 15
– Thorax normally without a pre-scutellar flattening ; hypopygium enclosed . . 16
15 Acrosticals biserial ; legs and abdomen relatively long . . ***Nepalomyia*** gen n.
– Acrosticals absent ; legs and abdomen of normal length . . ***Micromorphus*** Mik
16 Arista dorsal or sub-apical ; antennae placed near middle of head profile ; occiput concave 17
– Arista dorsal ; antennae placed in upper third of head profile ; occiput convex . 18
17 Wings wider in basal third than in apical third ; frons narrower than face ; ♂ with macrochaetae at tip of abdomen . . . . . ***Diaphorus*** Meigen
– Wings oval ; face narrower than frons ; ♂ abdomen without macrochaetae at tip ***Chrysotus*** Meigen
18 Bristles of head and thorax pale . . . . . ***Chrysotimus*** Loew
– Bristles of head and thorax black . . . . . ***Sympycnus*** Loew

Chrysosomatinae

Sciopus pediformis Becker

Sciopus pediformis Becker, 1922 : 204, fig. 180.

Described from 1 ♂ from Darjeeling 6–7,000′.

Apart from genitalia differences the ♀ has a wider face than the ♂ ; tibia 1 with a single dorsal bristle in the basal quarter ; tibia 2 with 2 antero-dorsal, 2 postero-dorsal and 1 ventral bristle ; tibia 3 with 1 long antero-dorsal, 5 short postero-dorsal and 2 short ventral bristles.

1 ♂, 1 ♀, NEPAL : Taplejung Distr., between Sangu and Tamrang, c. 5,600′, dense vegetation in tree shade by hill stream, 23.x.1961 (*R. L. Coe*).

Dolichopodinae

Dolichopus angustinervis Becker

Dolichopus angustinervis Becker, 1922 : 9, fig. 2.
Dolichopus angustinervis Becker ; Parent, 1934 : 301.
Dolichopus angustinervis Becker ; Parent, 1941 : 217.

Described from N. India and Formosa and later recorded from Honolulu (Parent 1934) and Nankin, China (Parent 1941).

1 ♀, Nepal : Katmandu, 4,500′, 20.v.1935 (*F. M. Bailey*) ; 1 ♀, Bakhri Kharka, 5,500′, 24.iv.1954 (*J. Quinlan*) ; 2 ♀, Taplejung Distr., Sangu, c. 6,200′, mixed vegetation by stream in gully, ix–x.1961 (*R. L. Coe*).

Hercostomus ulleriensis sp. n.

(Text-fig. 8)

♀. Frons one-third width of head, completely grey-brown dusted ; 1 pair of strong orbita bristles. Antennae mainly orange ; 3rd segment darkened at tip, as long as wide and bearing a pubescent arista dorsally. Face as wide as frons, silvery-white and with a convexity above oral margin. Palpi yellow, pale haired. Proboscis orange. Eyes short haired. Occiput grey ; post-ocular cilia black.

Thorax longer than wide ; dorsum metallic green, heavily grey dusted, chaetotaxy normal. Scutellum concolorous with dorsum, with 2 strong marginal bristles, each with a short hair in front, disc bare. Pleurae heavily grey dusted.

Abdomen metallic green, short bristled with longer bristles at posterior margins of tergites.

Legs mainly yellow. Coxae yellow, middle pair with a longitudinal grey stripe externally, dark bristled. Femora yellow, middle and posterior pairs with single pre-apical bristles. Leg 1—tibia yellow with 2 antero-dorsal, 1 postero-dorsal and no ventral bristles ; tarsus yellow-brown. Leg 2—tibia yellow with 4 antero-dorsal, 2 postero-dorsal and 1 ventral bristle ; tarsus brown-black. Leg 3—tibia yellow with 3 antero-dorsal, 4 postero-dorsal and a row of 6–7 short ventral bristles ; basitarsus yellow, following tarsal segments brown-black.

Wings pale brown hyaline ; 3rd and 4th long veins converging in their apical sections ; posterior cross-vein shorter than apical section of 5th vein. Squamae yellow, cilia black. Halteres yellow.

Length 4 mm.

♂ unknown.

Holotype ♀, Nepal : 2 miles S.W. of Ulleri, 6–7,000′, 18.v.1954 (*J. Quinlan*).

Of the Oriental species of *Hercostomus*, *lucidiventris* Becker, 1922, described from Formosa, is close but may be distinguished by its completely black antennae and yellow side-spots on the 1st three abdominal segments.

In keys to Palaearctic species *ulleriensis* sp. n. will run to *novus* Parent, 1927, described from China, but this species has an almost bare arista, mid and hind coxae are dark, fore-tibia has a ventral bristle and the posterior cross-vein is longer than the apical section of the 5th vein.

Hercostomus phollae sp. n.

(Text-figs. 9, 10)

♂. Frons less than one-third width of head, completely brown dusted ; orbital bristles weaker than inter-ocellars. Antennae orange-brown ; 3rd segment black in apical half, as

long as wide and bearing a micro-pubescent arista dorsally. Face half width of frons, brown dusted. Palpi black. Proboscis brown. Occiput grey, post-ocular cilia completely black.

Dorsum of thorax metallic green, heavily grey dusted, chaetotaxy normal. Scutellum concolorous with dorsum with 2 strong marginal bristles. Pleurae grey dusted.

Abdomen metallic green with strong patches of grey dusting laterally. Hypopygium large, black ; external lamellae small, black, subtriangular.

Legs mainly yellow. Coxae grey with yellow tips and black bristles. Femora yellow, hind pair with 4–5 pre-apical bristles. Leg 1—tibia yellow with 1 antero-dorsal, 2 postero-dorsal and no ventral bristles ; tarsus yellow-brown. Leg 2—tibiae missing from type. Leg 3—tibia yellow with 2 antero-dorsal, 4 postero-dorsal and no ventral bristles ; basitarsus yellow, following tarsal segments dark.

Wings clear hyaline ; 3rd and 4th long veins slightly convergent in their apical sections ; posterior cross-vein shorter than apical section of 5th vein. Cilia of squamae black. Halteres yellow.

♀ similar to ♂, tibia 2 with 3 antero-dorsal, 2 postero-dorsal and 1 ventral bristle.

Length 3 mm.

Holotype ♂, NEPAL : Taplejung Distr., above Sangu, c. 6,500′, evergreen scrub, 5–13.x.1961 (*R. L. Coe*).

Paratypes 2 ♀, Dobhan, c. 3,500′, shady places on shrubby slope above R. Tamur, 21–27.i.1962 (*R. L. Coe*).

H. compositus Becker, 1922, described from Satara District, 4,200′, appears close to *phollae* sp. n. but has antennal segments 1 and 2 black, face and frons black and yellow fore-coxae.

Hercostomus kaulbacki sp. n.

(Text-figs. 11, 12)

♂. Frons metallic green, grey dusted ; orbital bristles much weaker than inter-ocellars. Face less than half width of frons, silvery white. Antennae completely black ; 3rd segment rounded at apex, as long as wide and bearing a micropubescent arista dorsally. Palpi black, grey dusted ; proboscis black. Post-ocular cilia black dorsally, pale laterally and ventrally.

Thorax twice as long as wide ; dorsum metallic green, yellow-grey dusted and with a median longitudinal brown stripe ; acrostical bristles totally absent, other bristles much more hair-like than normal. Scutellum concolorous with dorsum with 2 strong marginal bristles. Pleurae metallic green, grey dusted.

Abdomen metallic green, evenly short, dark bristled. Hypopygium large, black ; external lamellae large, yellow with a darkened rim and bearing black bristles ; penis long, barbed in apical third.

Legs with coxae grey-brown, dark bristled, yellow at tips. Femora dark yellow, mid and hind pairs with single pre-apical bristles. Leg 1—tibia yellow with 1 antero-dorsal, 2 postero-dorsal and 1 antero-ventral bristle; basitarsus yellow, darkened at tip, following tarsal segments brown. Leg 2—tibia yellow with 4 antero-dorsal, 2 postero-dorsal and no ventral bristles ; tarsus brown. Leg 3—tibia yellow, brown in apical fifth, with 3 antero-dorsal, 3 postero-dorsal and 2 short ventral bristles ; tarsus black.

Wings pale brown hyaline ; anal lobe not developed ; costa thickened between endings of 1st and 2nd long veins ; 2nd long vein thickened in its basal two-thirds ; 3rd and 4th long veins slightly convergent in their apical sections ; apical section of 5th long vein twice as long as posterior cross-vein. Squamae and cilia pale. Halteres yellow.

♀ unknown.

Length 4·5 mm.

Holotype ♂, S.E. Tibet : Rong Tō Valley, 21.v.1933, 6,500′ (*F. Kingdon-Ward & R. J. H. Kaulback*).

This species is not related to the Oriental fauna but in the Palaearctic region *crassivena* Stackelberg, 1934, described from China, is close but has both 2nd and 3rd long veins thickened basally, biserial acrosticals and the middle tibia has a ventral bristle.

Key to Himalayan *Hercostomus*

1	Antennae completely black	2
–	Antennae mainly yellow	3
2	Fore-coxae yellow ; acrosticals present and biserial ; in ♂ 2nd vein simple	***caecus*** Becker
–	Fore-coxae grey ; acrosticals absent ; in ♂ 2nd long vein thickened in its basal two-thirds	***kaulbacki*** sp. n.
3	All coxae grey ; 4–5 pre-apical bristles on hind femur ; 3rd and 4th long veins slightly convergent ; in ♀ face narrow, brown	***phollae*** sp. n.
–	All coxae yellow ; 1 pre-apical bristle on hind femur ; 3rd and 4th long veins strongly convergent ; in ♀ face wide, white	***ulleriensis*** sp. n.

Tachytrechus crassitarsis de Meijere

(Text-figs. 13, 14)

Tachytrechus crassitarsis de Meijere, 1916 : 237.
Tachytrechus crassitarsis de Meijere ; Becker, 1922 : 32.

Described from 1 ♂ and 1 ♀ from Java and recorded from Nepal (Becker, 1922).

The types have been examined and de Meijere's description is adequate. Figures are given of the ♂ fore-tarsus, penis sheath and ventral lobe.

Tachytrechus compositus sp. n.

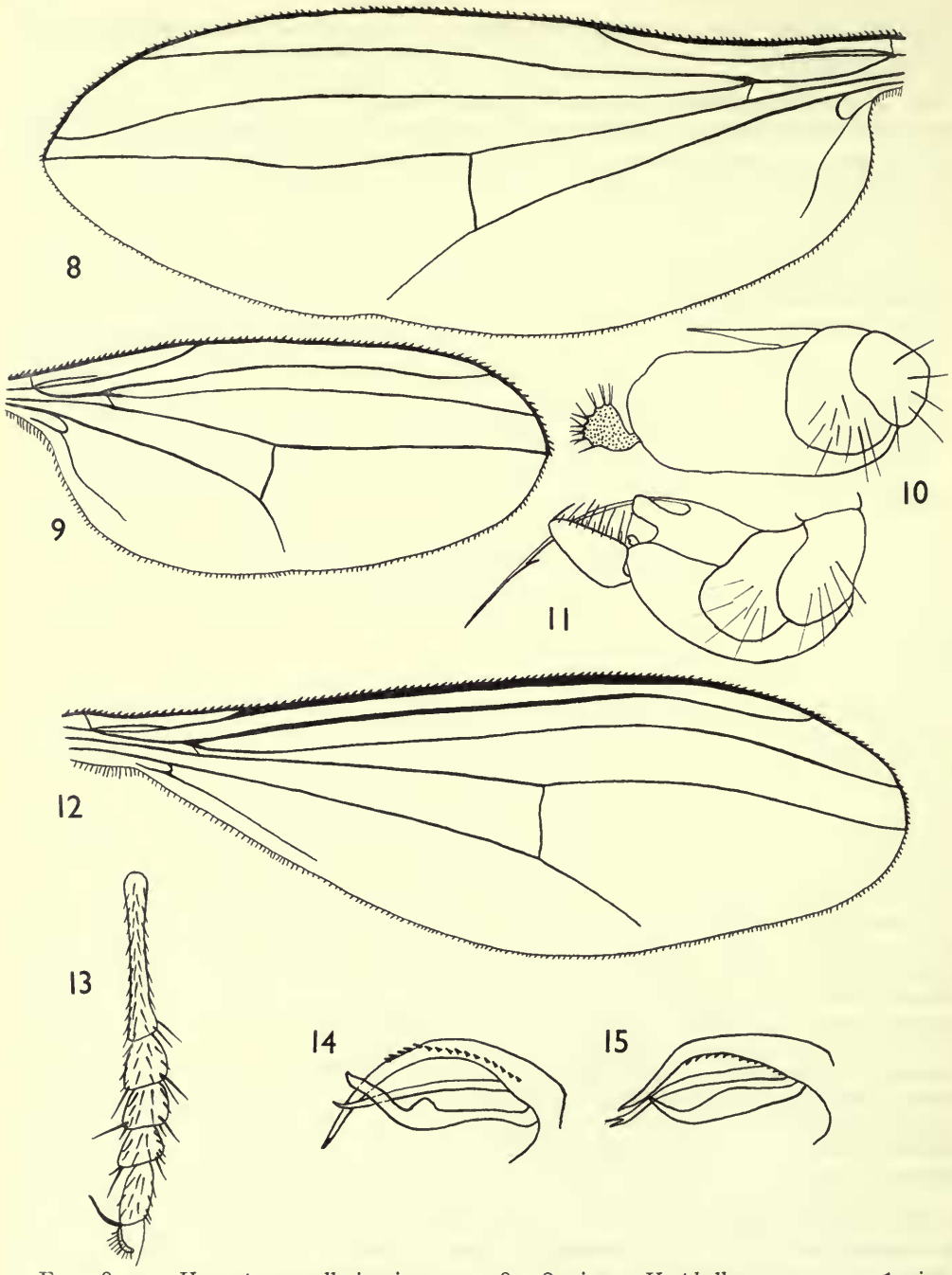
(Text-fig. 15)

♂. Frons one-third width of head, metallic green, grey-brown dusted. Antennae mainly black, 1st segment orange apico-ventrally ; 3rd segment rounded, with dorsal arista. Face metallic green, yellow-grey dusted, half width of frons just below antennae and widening to one and a half times its original width at clypeus, latter separated from inner eye margins and extending almost to level of lower eye margins. Palpi and proboscis black. Post-ocular cilia black above, pale laterally and ventrally.

Dorsum of thorax dark metallic green, grey dusted, darker at bases of bristles ; chaetotaxy normal. Pleurae metallic green, grey dusted.

Abdomen metallic green, heavily grey dusted laterally ; short, black bristled but posterior margins of tergites bear longer bristles. Hypopygium black ; external lamellae black, sub-triangular ; penis sheath serrate laterally.

Legs with coxae green-grey, dark bristled. Femora green-grey, fore- and middle pairs yellow in apical quarter, posterior pair with a sub-apico-dorsal row of 4–5 bristles. Leg 1—tibia yellow, black apically, with 3 antero-dorsal, 2 postero-dorsal and no ventral bristles ; basitarsus yellow, black in apical third, following tarsal segments black, longer than wide and not flattened. Leg 2—tibia yellow, black apically, with 5 antero-dorsal, 3 postero-dorsal and 1 ventral bristle ; tarsal segments 1–4 each with 1 long and 1 short apico-ventral bristle, basitarsus yellow basally and black in the apical third, following tarsal segments dark. Leg 3—tibia yellow, black



FIGS. 8–15. *Hercostomus ulleriensis* sp. n. 8. ♀ wing : *H. phollae* sp. n. 9. ♂ wing. 10. ♂ hypopygium : *H. kaulbacki* sp. n. 11. ♂ hypopygium. 12. ♂ wing : *Tachytrechus crassitarsis* de Meijere. 13. ♂ fore-tarsus. 14. ♂ penis sheath and ventral lobe : *T. compositus* sp. n. 15. ♂ penis sheath and ventral lobe.

apically, with 6 antero-dorsal, 5 postero-dorsal and a row of 5–6 short ventral bristles ; basitarsus black but yellow in externo-basal half, following tarsal segments black, segments 1–4 each with 1 long and 1 short apico-ventral bristle.

Wings clear hyaline, costa thickened between *h* and R_1 ; 3rd and 4th long veins convergent apically ; posterior cross-vein convex to posterior wing margin and of equal length to apical section of 5th vein. Squamae pale, cilia dark. Halteres orange.

♀ similar to ♂ but with shorter 1st antennal segment ; tibia 1 with 3 antero-dorsal, 2 postero-dorsal and 2 postero-ventral bristles ; tibia 2 with 3 antero-dorsal, 4 postero-dorsal,1 antero-ventral and 2 postero-ventral bristles.

Length 5 mm.

Holotype ♂, NEPAL : Taplejung Distr., Sangu, c. 6,200′, yellow blooms of cultivated Compositae, 16–29.x.1961 (*R. L. Coe*).

Paratypes 2 ♀, same data as Holotype.

Compositus sp. n. may be separated from the other species of *Tachytrechus* in the Oriental region by the following key :—

1	Femora mainly yellow	2
–	Femora mainly dark	3
2	Antennal segments 1 and 2 yellow	***picticornis*** Bigot
–	Antennae completely black ; wing darkened apically between 2nd and 3rd long veins	***argentatus*** de Meijere
3	Tibia 2 with more than 4 ventral bristles	4
–	Tibia 2 with, at most, 3 ventral bristles	5
4	Tibiae brown-black, fore-tarsus of ♂ simple	***genualis*** Loew
–	Tibiae mainly yellow, last 4 segments of ♂ fore-tarsus flattened laterally	***indicus*** Parent
5	Hind basitarsus yellow in basal half on external surface ; tibia 2 with at most 3 ventral bristles ; in ♂ fore-tarsus not flattened laterally	***compositus*** sp. n.
–	Hind basitarsus completely black ; tibia 2 without ventral bristles ; in ♂ segments 2–4 of fore-tarsus flattened laterally	***crassitarsis*** de Meijere

Hydrophorinae

Thinophilus indigenus Becker

Thinophilus indigenus Becker, 1903 : 73.
Thinophilus indigenus Becker ; Becker, 1922 : 37, fig. 27.
Thinophilus indigenus Becker ; Ribeiro, 1923 : 336.
Thinophilus indigenus Becker ; Frey, 1925 : 24.
Thinophilus indigenus Becker ; Parent, 1934 : 306.
Thinophilus indigenus Becker ; Parent, 1935 : 210 and 528.
Thinophilus indigenus Becker ; Vaillant, 1953 : 3, figs. 1–9.

This widely distributed species was described from Egypt (Becker, 1903) and recorded from Formosa (Becker, 1922), Nepal (Ribeiro, 1923), Philippines (Frey, 1925), India (Parent, 1934), Malay Peninsula and N. Borneo (Parent, 1935) and Algeria (Vaillant, 1953).

Rhaphiinae

Syntormon dukha sp. n.

(Text-figs. 16–18)

♂. Frons wide, shining blue-violet. Antennae completely black ; 1st segment with 1–2 bristles dorsally ; 2nd segment haired above and produced thumb-like into inner surface of

3rd segment, being completely covered by 3rd segment ventrally but only in its apical half dorsally ; 3rd segment slightly less than three times as long as wide and bearing an arista sub-apically which is as long as 3rd segment. Face narrow, silver pruinose. Palpi black, silver pollinose ; proboscis black. Post-ocular cilia uniserial and dark above, multiserial and pale below.

Dorsum of thorax shining metallic green, brown dusted ; acrostical bristles uniserial, 6 pairs of dorso-centrals, prothoracic hairs pale. Scutellum concolorous with dorsum with 2 strong marginal bristles. Pleurae grey dusted, pteropleura bearing a tuft of long, pale hairs.

Abdomen long, metallic green, tergite 1 with post-marginal row of very long, black bristles. Hypopygium enclosed.

Legs with coxa 1 yellow, pale haired and with black apical bristles ; coxae 2 and 3 dark, latter with a single external bristle. Femora yellow, posterior pair brown apically, each with a dark externo-ventral streak along its entire length. Leg 1—tibia yellow with a weak antero-dorsal bristle in basal third and 2 weak postero-dorsal bristles in apical third ; basitarsus yellow in basal third, remainder black, following tarsal segments black, basitarsus as long as segments 2–4 together. Leg 2—tibia yellow with 3 antero-dorsal, 2 postero-dorsal and 3 ventral bristles ; basitarsus yellow, black in apical fifth, following tarsal segments dark. Leg 3—tibia yellow but darkening to black in apical third, with 5 postero-dorsal bristles and an antero-dorsal fringe of bristles in apical two-thirds which become longer towards apex ; tarsus black, basitarsus slightly shorter than following segment and bearing an unequally bifid black spine in ventral third.

Wings pale brown hyaline ; 2nd and 3rd veins divergent, 3rd and 4th veins convergent ; posterior cross-vein longer than apical section of 5th vein. Squamae and cilia pale. Halteres yellow.

♀ similar to ♂ but with short 3rd antennal segment ; wide face which is convex below ; tibia 2 with 5 antero-dorsal, 2 postero-dorsal and 3 antero-ventral bristles ; posterior femora without externo-ventral brown streak ; posterior tibia completely yellow and without antero-dorsal fringe of bristles ; simple hind basitarsus.

Length 4·5 mm.

Holotype ♂, NEPAL : Taplejung Distr., Sangu, c. 6,200′, yellow blooms of cultivated Compositae, 16–29.x.1961 (*R. L. Coe*).

Paratypes 2 ♀, mixed vegetation by stream in gully, xi.1961–i.1962 (*R. L. Coe*).

S. dukha sp. n. is probably not related to the known Oriental species of *Syntormon*. Of the Palaearctic species *pallipes* (Fabricius) is close but may be differentiated by its apical arista, equally bifid spine on hind basitarsus, and more complete dorsal row of longer bristles on hind tibia.

Syntormon babu sp. n.

(Text-figs. 19, 20)

♂. Frons wide, shining metallic blue-violet. Antennae completely black ; 1st segment bare above ; 2nd segment haired above and produced thumb-like into inner surface of 3rd segment; latter not quite three times as long as wide and bearing an arista sub-apically which is not as long as 3rd antennal segment. Face narrow, silver pruinose. Palpi and proboscis black. Eyes short pale haired. Post ocular cilia black and uniserial above, pale and multiserial below.

Dorsum of thorax shining metallic green, brown dusted ; acrostical bristles microscopic, uniserial ; 6 pairs of dorso-centrals. Pleurae grey dusted, pteropleura weakly pale haired. Scutellum concolorous with dorsum with 2 marginal bristles.

Abdomen long, metallic green. Hypopygium enclosed.

Legs with anterior coxae yellow, pale haired and with black apical bristles ; mid and posterior coxae dark with pale tips, posterior pair with a single external black bristle. Femora

completely yellow. Leg 1—tibia yellow with 1 weak dorsal bristle medially ; basitarsus yellow and as long as segments 2 and 3 together, segments 2–5 brown. Leg 2—tibia yellow with 3 antero-dorsal, 1 postero-dorsal and 2 antero-ventral bristles ; basitarsus yellow but darkening apically, following tarsal segments dark. Leg 3—tibia yellow with a weak antero-dorsal fringe of bristles in apical half, and 3 strong postero-dorsal bristles ; basitarsus brown, shorter than following segment and with a simple curved spine ventro-medially, following tarsal segments black.

Wings very pale brown hyaline ; 2nd and 3rd long veins divergent, 3rd and 4th long veins convergent ; posterior cross-vein shorter than apical section of 5th vein ; anal vein weak. Squamae and cilia pale. Halteres yellow.

♀ unknown.

Length 3·5 mm.

Holotype ♂, NEPAL : Taplejung Distr., between Sangu and Tamrang, mixed plants by damp cliff in deep river gorge, c. 5,200′, i–ii.1962 (*R. L. Coe*).

This species is related to *dukha* sp. n. from which it may be easily distinguished by the simple spine on the hind basitarsus and the more enclosed 2nd antennal segment.

Syntormon ama sp. n.

(Text-figs. 21, 22)

♂. Frons wide, shining metallic blue-green. Antennae completely black, 1st segment bare above (?), 2nd segment haired above and produced thumb-like into inner surface of 3rd segment, latter flask shaped and two and a half times as long as wide, arista apical and half as long as 3rd antennal segment. Face narrow, silver pruinose. Palpi and proboscis black. Eyes short pale haired. Post-ocular cilia uniserial and black above, pale and multiserial below.

Dorsum of thorax shining metallic green with longitudinal brown stripes in regions of acrostical and dorso-central bristles ; acrosticals biserial, 6 pairs of dorso-centrals, prothoracic hairs pale. Scutellum concolorous with dorsum with 2 strong marginal bristles. Pleurae grey dusted, pteropleura weakly pale haired.

Abdomen dark metallic green ; hypopygium enclosed.

Legs with anterior coxae pale, dark at base, with pale hairs and black apical bristles ; mid and hind coxae dark, pale at tips, hind pair with a black bristle externally. Femora yellow, hind pair darkened apically. Leg 1—tibia yellow, with 1 dorsal bristle in basal third ; tarsus brown, basitarsus as long as segments 2–4 together. Leg 2—tibia yellow, with 3 antero-dorsal, 1 postero-dorsal and no ventral bristles ; basitarsus black apically but mainly yellow, following tarsal segments dark. Leg 3—tibia yellow, brown-black apically, with 3 antero-dorsal, 4 postero-dorsal and a row of short ventral bristles ; tarsus black, basitarsus simple, shorter than following tarsal segment.

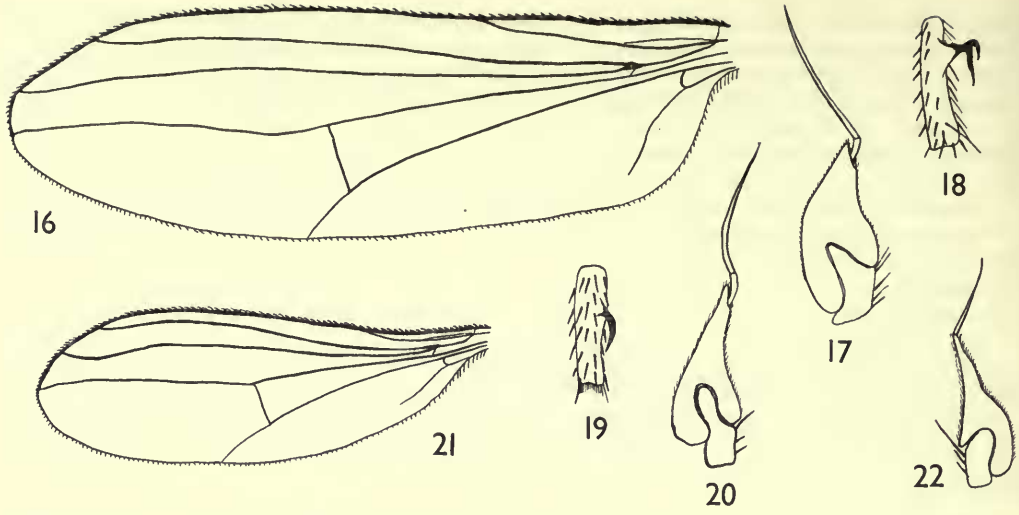
Wings clear hyaline ; 2nd and 3rd veins divergent, 3rd and 4th veins convergent, posterior cross-vein shorter than apical section of 5th vein, anal vein weak. Squamae pale, cilia brown. Halteres yellow.

♀ unknown.

Length 2·5 mm.

Holotype ♂, NEPAL : Taplejung Distr., Dobhan, c. 3,500′, shady places on shrubby slope above R. Tamur, 21–27.i.1962 (*R. L. Coe*).

S. frivolus Becker, 1922, is related to *ama* sp. n. but differs in that the acrostical bristles are uniserial and the hind femora are completely yellow.



FIGS. 16–22. *Syntormon* spp., *S. dukha* sp. n. 16. ♂ wing. 17. ♂ 2nd and 3rd antennal segments. 18. ♂ hind basitarsus : *S. babu* sp. n. 19. ♂ hind basitarsus. 20. ♂ 2nd and 3rd antennal segments : *S. ama* sp. n. 21. ♂ wing. 22. ♂ 2nd and 3rd antennal segments.

KEY TO NEPALESE SPECIES OF *Syntormon*

1 Acrostical bristles completely biserial ; arista apical ; in ♂ hind basitarsus simple, posterior cross-vein shorter than apical section of 5th vein . . . . ***ama*** sp. n.
– Acrostical bristles irregularly uniserial, arista sub-apical ; in ♂ hind basitarsus with a spine ventrally 2
2 Hind basitarsal spine of ♂ bifid ; 3rd antennal segment not extending down dorsal surface of pedicel ; posterior cross-vein longer than apical section of 5th vein ***dukha*** sp. n.
– Hind basitarsal spine of ♂ simple ; 3rd antennal segment extended for some length over dorsal surface of pedicel ; posterior cross-vein shorter than apical section of 5th vein . . . . . ***babu*** sp. n.

Diaphorinae

Diaphorus jeanae sp. n.

(Text-fig. 23)

♂. Frons metallic green, heavily yellow dusted, less than one-eighth width of head but hardly narrower than face ; orbital bristles not developed, interocellars strong. Antennae in centre of head profile ; 1st segment yellow, bare above ; 2nd segment black with an apical crown of short bristles ; 3rd segment black, triangular, hardly longer than wide and bearing a pubescent arista sub-apically. Face grey. Palpi yellow with black bristles, proboscis brown. Eyes widely separated over frons, short pale haired. Occiput grey, post-vertical bristles developed but in same series as post-ocular cilia ; latter black and uniserial above, pale and multiserial below.

Dorsum of thorax metallic green, heavily yellow-grey dusted ; acrostical bristles biserial, 5 pairs of dorso-centrals, rest of chaetotaxy complete. Scutellum slightly darker than dorsum with 2 strong marginal bristles each with a hair-like bristle in front. Pleurae metallic green, grey dusted.

Abdomen with segments 1–3 mainly yellow, segments 4–5 and hypopygium metallic green ; 2 strong macrochaetae present at tip of abdomen. Lamellae strap-like, not as long as abdomen is deep, yellow with black hairs.

Legs with coxa 1 yellow with black bristles ; coxa 2 grey, black bristled ; coxa 3 yellow with a single black bristle externally. Femora yellow with double ventral fringes of black bristles which are slightly shorter than the femur is wide. Leg 1—tibia yellow without strong bristles ; basitarsus yellow and as long as following tarsal segments together, segment 5 with long hairs dorsally, pulvilli large. Leg 2—tibia yellow with 2 antero-dorsal, 1 postero-dorsal and 1 ventral bristle ; basitarsus yellow, following tarsal segments brown, pulvilli large. Leg 3—tibia yellow with 3 dorsal bristles ; tarsus brown, basitarsus slightly longer than following tarsal segment, pulvilli small.

Wings clear hyaline ; 2nd vein sinuous, 3rd and 4th veins parallel in their apical sections, posterior cross-vein shorter than apical section of 5th vein. Squamae yellow, cilia dark. Halteres yellow.

♀. Unknown.

Length 4 mm.

Holotype ♂, NEPAL : Bakhri Kharka, 5,500′, 24.iv.1954 (*J. Quinlan*).

D. mandarinus Wiedemann, the only species of *Diaphorus* previously recorded from Nepal, is closely related to *jeanae* sp. n. but may be distinguished by its mainly yellow antennae, the much narrower face in the ♂ and the shorter genital lamellae.

Diaphorus sanguensis sp. n.

♀. Frons metallic green, grey dusted, one-third width of head ; orbital and interocellar bristles well developed. Antennae in middle of head profile ; 1st segment bare above, mainly black but with orange-yellow coloration on inner ventral aspect ; 2nd segment black with an apical crown of short bristles ; 3rd segment black, wider than long and bearing a pubescent arista sub-apically. Face as wide as frons, heavily grey dusted. Palpi yellow with black bristles, proboscis black. Occiput grey ; post-ocular cilia black and uniserial above, pale and multiserial below.

Dorsum of thorax shining metallic green, grey dusted ; acrostical bristles biserial, 5 pairs of dorso-centrals. Scutellum concolorous with dorsum with 2 strong marginal bristles each with a short hair in front. Pleurae metallic green, grey dusted.

Abdomen with segment 1 completely yellow, 2nd segment yellow ventrally and in anterior half laterally but green dorsally in the mid line, following segments metallic green.

Legs with coxa 1 yellow, black bristled ; coxa 2 grey, black bristled ; coxa 3 yellow with a single black bristle externally. Femora yellow, without ventral fringes of hairs or bristles. Leg 1—tibia yellow with 1 antero-dorsal, 2 postero-dorsal and no ventral bristles ; basitarsus yellow, following tarsal segments darker. Leg 2—tibia yellow, with 3 antero-dorsal, 3 postero-dorsal and 3 ventral bristles ; basitarsus yellow, following tarsal segments brown. Leg 3—tibia yellow, with 2 antero-dorsal, 4 postero-dorsal and a row of short ventral bristles ; basitarsus yellow and slightly longer than 2nd tarsal segment, following tarsal segments brown.

Wings clear hyaline ; 2nd vein slightly sinuous, 3rd and 4th veins parallel apically, posterior cross-vein shorter than apical section of 5th vein. Squamae pale, cilia dark. Halteres yellow.

♂. Unknown.

Length 4 mm.

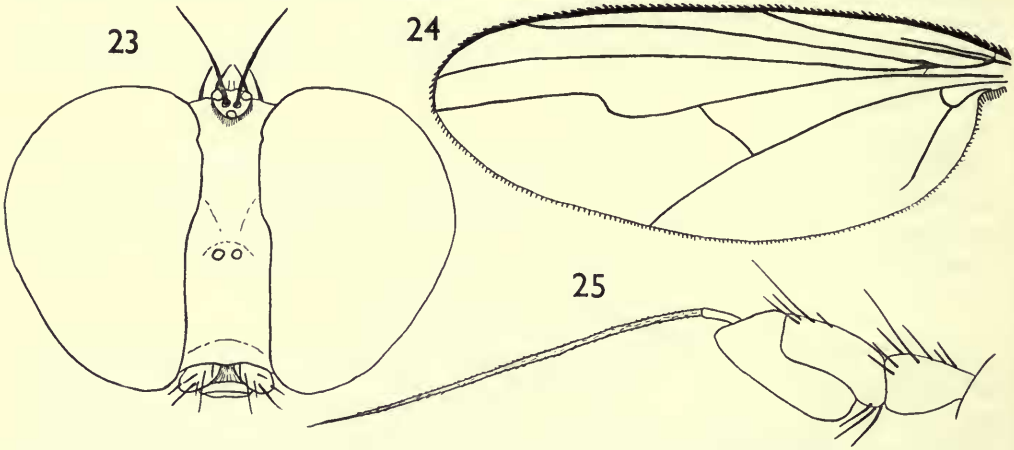
Holotype ♀, NEPAL : Taplejung Distr., Sangu, c. 6,200′, mixed vegetation by stream in gully, ix–x.1961 (*R. L. Coe*).

D. sanguensis sp. n. may be separated from the other known species of *Diaphorus* in the Oriental Region by the colour combination of antennae, abdomen and legs.

Diaphorus mandarinus Wiedemann

Diaphorus mandarinus Wiedemann, 1830 : 212.
Diaphorus mandarinus Wiedemann ; Becker, 1922 : 78.
Diaphorus mandarinus Wiedemann ; Ribeiro, 1923 : 339.
Diaphorus mandarinus Wiedemann ; Frey, 1925 : 23.
Diaphorus mandarinus Wiedemann ; Parent, 1934 : 301.

A widely distributed species originally described from China (Wiedemann, 1830) and later recorded from Formosa and India (Becker, 1922), Nepal (Ribeiro, 1923), the Philippines (Frey, 1925) and Central Borneo (Parent, 1934).



FIGS. 23–25. *Diaphorus jeanae* sp. n. 23. ♂ head, from front : *Argyra pseudosuperba* sp. n. 24. ♀ wing. 25. ♀ antenna.

KEY TO HIMALAYAN SPECIES OF *Diaphorus*

1 Antennae completely black ; abdomen without yellow coloration ; all coxae dark ***hirsutipes*** Becker
– Antennae partly yellow ; abdomen with yellow coloration ; fore- and hind-coxae yellow 2
2 First antennal segment completely yellow ; 3rd abdominal segment yellow . . 3
– First antennal segment black above ; 3rd abdominal segment metallic green ***sanguensis*** sp. n.
3 2nd and 3rd antennal segments black ; in ♂ frons hardly narrower than face ***jeanae*** sp. n.
– 2nd antennal segment yellow, 3rd brown ; in ♂ frons at most one-third width of face ***mandarinus*** Wiedemann

Chrysotus discretus Becker

Chrysotus discretus Becker, 1922 : 89.

Described from various localities in the Indian Himalayas.

3 ♂, 2 ♀, NEPAL : Taplejung Distr., Sangu, c. 6,200′, mixed vegetation by stream in gully, ix–x.1961 ; 2 ♂, 3 ♀, xi.1961–i.1962 ; 5 ♂, 2 ♀, yellow blooms of cultivated

Compositae, 16–29.x.1961 ; 1 ♂, 1 ♀, rotting fruits of Bhor tree on ground, 7–31.x. 1961 ; 4 ♂, 1 ♀, above Sangu, c. 6,500′, evergreen shrubs, 5–13.x.1961 ; 1 ♂, 1 ♀, edge of mixed forest above Sangu, c. 6,500′, 17.x.–1.xi.1961 ; 3 ♂, between Sangu and Tamrang, deep river gorge, c. 5,200′, x–xi.1961 ; 2 ♂, shrubs by path, c. 5,800′, 6.xi.1961 ; 1 ♂, river banks below Tamrang bridge, c. 5,500′, x–xi.1961 ; 1 ♀, Arun Valley, above R. Sabhaya, east shore, swept from dwarf bamboos in deep ravine, c. 2,000′, 12.xii.1961 (*R. L. Coe*) ; 2 ♀, Bahkri Kharka, 5,500′, 24.iv.1954 ; 1 ♂, 2 miles S.W. of Rambrong, 8,000′, 26.iv.1954 ; 1 ♂, 5 ♀, 2 miles S.W. of Ulleri, 6–7,000′, 18.v.1954 ; 2 ♀, S.E. Sikha, 7–8,000′, 23.v.1954 (*J. Quinlan*).

Chrysotus pseudocilipes sp. n.

♂. Frons shining metallic green, coarsely pitted. Antennae completely black ; 3rd segment wider than long, subreniform with pointed tip and bearing a pubescent arista sub-apically. Eyes short pale haired, contiguous over face. Palpi yellow, proboscis black. Post-ocular cilia black above, pale laterally and ventrally.

Dorsum of thorax shining metallic green with reddish tinges ; chaetotaxy normal. Scutellum concolorous with dorsum with 2 strong marginal bristles.

Abdomen metallic green, evenly short bristled. Hypopygium enclosed.

Legs with anterior coxae yellow, dark at base, dark bristled ; mid and hind coxae dark with pale tips, hind pair with a long, black bristle externally. Femora yellow, posterior pair dark in apical quarter and with 2–3 long bristles apico-ventrally. Leg 1—tibia yellow with a single dorsal bristle in basal third ; basitarsus yellow, almost as long as following tarsal segments together, these latter segments brown. Leg 2—tibia yellow with 2 long antero-dorsal, 2 shorter postero-dorsal and no ventral bristles ; tarsus darkening towards tip. Leg 3—tibia yellow, darkened in apical quarter and with an irregular short ciliation on external surface ; tarsus brown, basitarsus slightly longer than following tarsal segment and with a short ciliation on external surface.

Wings pale brown hyaline ; 3rd and 4th long veins slightly divergent ; apical section of 5th vein 4·4 times as long as posterior cross-vein. Squamae and cilia pale. Halteres pale.

♀. Similar to ♂ but eyes widely separated over face which is heavily grey dusted.

Length 2 mm.

Holotype ♂, NEPAL : Taplejung Distr., Sangu, c. 6,200′, yellow blooms of cultivated Compositae, 16–29.x.1961 (*R. L. Coe*).

Paratypes 2 ♂, 1 ♀, mixed vegetation by stream in gully, ix–x.1961 (*R. L. Coe*).

This species is closely related to *cilipes* Meigen, 1824, differing in the irregular ciliation of the hind tibia and tarsus, and the absence of a ventral row of bristles in apical third of hind tibia.

Chrysotus kholsa sp. n.

♂. Frons shining metallic green, coarsely pitted. Antennae completely black ; 3rd segment reniform and bearing a pubescent arista dorsally. Eyes short pale haired, contiguous over face. Palpi yellow, proboscis dark. Post-ocular cilia black above, pale laterally and ventrally.

Dorsum of thorax shining metallic green, chaetotaxy complete.

Abdomen metallic green, evenly short bristled. Hypopygium enclosed.

Legs with coxae dark, pale at tips, dark bristled. Fore and mid femora broadly brown medially, posterior femora dark in apical quarter. Leg 1—tibia yellow with a single weak dorsal bristle in basal third ; basitarsus yellow, following tarsal segments dark. Leg 2—tibia yellow with 2 antero-dorsal, 2 postero-dorsal and no ventral bristles ; basitarsus yellow, following

tarsal segments dark. Leg 3—tibia yellow-brown, darker apically, with 3 dorsal bristles and a regular, short ciliation on external surface ; tarsus brown.

Wings clear hyaline ; 3rd and 4th veins parallel, posterior cross-vein one-third length of apical section of 5th vein. Squamae pale, cilia dark. Halteres pale.

♀. Similar to ♂ but eyes widely separated over face which is metallic green and grey dusted. Length 2·5 mm.

Holotype ♂, NEPAL : Taplejung Distr., Sangu, c. 6,200′, mixed vegetation by stream in gully, ix–x.1961 (*R. L. Coe*).

Paratypes 4 ♀, same data as Holotype ; 1 ♀, xi.1961–i.1962 ; 1 ♀, yellow blooms of cultivated Compositae, 16–29.x.1961 (*R. L. Coe*).

C. kholsa sp. n. is similar to the previous species from which it may be readily distinguished by the leg coloration, the shape of the 3rd antennal segment and the chaetotaxy of the hind tibia.

KEY TO NEPALESE SPECIES OF *Chrysotus*

1 Post-ocular cilia completely black ; femora almost completely dark, only extreme tips pale . . . . . ***discretus*** Becker
– Post-ocular cilia pale laterally and ventrally ; anterior and middle femora, at most, darkened medially 2
2 Fore-coxae mainly pale ; anterior and middle femora completely pale, posterior pair darkened in apical quarter . . . . . ***pseudocilipes*** sp. n.
– Fore-coxae mainly dark ; femora broadly dark medially . . . ***kholsa*** sp. n.

Argyra pseudosuperba sp. n.

(Text-figs. 24, 25)

♀. Frons a quarter width of head, metallic blue-violet with grey dusting at edges ; paired orbital and interocellar bristles well developed. Antennae completely black ; 1st segment short, haired dorsally ; 2nd segment extended more than halfway over dorsal and dorso-lateral surfaces of 3rd antennal segment ; latter triangular, longer than wide and bearing a microscopically pubescent arista dorsally which is at least 1·8 times as long as 3rd antennal segment. Face as wide as frons, parallel sided, silver pruinose. Palpi and proboscis black. Eyes densely short pale haired. Occiput metallic green, silver dusted. Post-ocular cilia black and uniserial above, pale and multiserial laterally and ventrally.

Dorsum of thorax metallic green, heavily silver dusted ; acrostical bristles quadriserial, 6 pairs of dorso-centrals, whole disc with supplementary hairs. Scutellum concolorous with dorsum with 4 marginal bristles and supplementary hairs on disc. Pleurae heavily grey dusted.

Abdomen metallic green with tergites silver dusted at their bases laterally; densely short bristled, posterior margins of tergites with longer bristles.

Legs with coxa 1 yellow, silver dusted and black bristled ; middle and posterior coxae dark, posterior pair with an externo-vertical row of dark hairs. Femora yellow, evenly covered with moderately long hairs, middle and posterior pairs with single pre-apical bristles. Leg 1—tibia yellow with 4–5 antero-dorsal, 3 posterior dorsal and no ventral bristles ; basitarsus yellow, longer than following tarsal segments together, these being brown. Leg 2—tibia yellow with 3 antero-dorsal, 2 postero-dorsal and 3–4 short ventral bristles ; basitarsus yellow, longer than following tarsal segments together, these being brown. Leg 3—tibia yellow, brown at extreme tip, with 4 long antero-dorsal, 4 long postero-dorsal and no long ventral bristles, the whole segment being covered with short hair-like bristles ; tarsus black, basitarsus as long as 2nd tarsal segment.

Wings broad, pale brown hyaline ; 2nd and 3rd veins divergent, 3rd and 4th veins parallel apically, 4th vein with a strong Z-bend in apical section, posterior cross-vein sinuous and shorter than apical section of 5th vein, anal vein almost reaching to wing margin. Squamae yellow with dark tips and black cilia. Halteres orange.

♂. Unknown.

Length 6·5 mm.

Holotype ♀, NEPAL : Taplejung Distr., Sangu, c. 6,200′, mixed vegetation by stream in gully, ix–x.1961 (*R. L. Coe*).

Paratype ♀, INDIA : pres. E. Brunetti.

A. superba Tagaki, 1960, described from Japan, is very close to *pseudosuperba* sp. n., differing in that the frons is more heavily silver dusted, the squamal cilia are pale, wing veins 2 and 3 are more divergent, the 4th wing vein has a less accentuated Z-bend, the arista is shorter in relation to the 3rd antennal segment and the chaetotaxy of the legs is different.

Campsicneminae

Micromorphus albipes (Zetterstedt)

Hydrophorus albipes Zetterstedt, 1843 : 454.
Medeterus albipes (Zetterstedt) Raddatz, 1873 : 330.
Thrypticus bellus Strobl, 1880 : 59.
Pseudacropsilus claripennis Strobl, 1899 : 124.
Micromorphus albipes (Zetterstedt) Becker, 1918 : 124.
Micromorphus albipes (Zetterstedt) ; Parent, 1929 : 194.
Micromorphus albipes (Zetterstedt) ; Parent, 1938 : 652, figs. 904–907.

This species is widely distributed in Europe and has been recorded from Costa Rica and New Zealand (Parent, 1929) and North Africa (Parent, 1938).

1 ♂, NEPAL : Arun Valley, below Tumlingtar, River Sabhaya, west shore, c. 1,800′, dead leaves lying in sun on sandy shore, 22.xii.1961 (*R. L. Coe*).

Sympycnus laetus Becker

Sympycnus laetus Becker, 1922 : 94, fig. 42.
Pycsymnus laetus (Becker) Frey, 1925 : 21.
Pycsymnus laetus (Becker) ; Frey, 1928 : 20.
Sympycnus laetus Becker ; Parent, 1932a : 115.

Originally described from Formosa, New Guinea, Seleo and Singapore and later recorded from the Philippines (Frey, 1928) and Sumbawa and Flores (Parent, 1932a).

3♂, 1 ♀, NEPAL : Arun Valley, R. Arun below Tumlingtar, c. 1,800′, 14–23.xii.1961, evergreen shrubs bordering dry stream beds ; 2 ♂, 1 ♀, above R. Sabhaya, east shore, swept from dwarf bamboos in deep ravine, c. 2,000′, 12.xii.1961 (*R. L. Coe*).

Sympycnus turbidus Becker

Sympycnus turbidus Becker, 1922 : 105.
Pycsymnus turbidus (Becker) Frey, 1925 : 21.
Sympycnus turbidus Becker ; Parent, 1932a : 115.

Described from Kurseong, Eastern Himalayas (4,700′), and recorded from the Philippines (Frey, 1925) and Flores (Parent, 1932a).

1 ♂, NEPAL : Taplejung Distr., Sangu, c. 6,200′, mixed vegetation by stream in gully, ix–x.1961 (*R. L. Coe*).

Sympycnus gummigutti Becker

Sympycnus gummigutti Becker, 1922 : 95, fig. 53.

Described from Nepal, Burma and Darjeeling.

Sympycnus arunensis sp. n.

(Text-figs. 26–29)

♂. Frons shining metallic green-violet. Antennae with segments 1 and 2 yellow, latter with an apical crown of short bristles ; 3rd antennal segment brown, triangular, not longer than wide and bearing a pubescent arista dorsally. Eyes short pale haired, contiguous over face. Palpi and proboscis yellow-brown. Occiput grey, post-ocular cilia uniserial, black above, pale laterally and ventrally.

Dorsum of thorax yellow with a broad, longitudinal, metallic green stripe medially ; acrostical bristles biserial, 6 pairs of dorso-centrals. Scutellum metallic green centrally but broadly yellow laterally and apically, bearing 2 strong marginal bristles. Pleurae yellow.

Abdomen yellow but tergites have small, triangular, black patches dorsally at anterior margins. Hypopygium brown ; lamellae yellow, pale haired, pointed oval.

Legs completely yellow, dark bristled. Fore-tibia without bristles ; fore-tarsal segments bear a ventral fringe of short hairs, the basitarsus bearing a longer hair in the basal third. Leg 2—tibia bowed, with 3 antero-dorsal, 1 postero-dorsal and an antero-ventral fringe of hairs which become longer towards tibial tip, intermingled with this fringe apically are 5 long, sinuous bristles ; basitarsus bears 3 sinuous bristles ventrally and a group of 3 hairs which mat at their tips. Leg 3—tibia with 3 dorsal bristles ; basitarsus much reduced, 2nd tarsal segment not as long as basitarsus and bearing a bifid lobe apico-ventrally, 3rd segment over twice as long as segments 1 and 2 together and with a ventral row of short bristles.

Wings pale brown hyaline ; 3rd and 4th veins slightly convergent ; posterior cross-vein longer than apical section of 5th vein. Squamae pale with darker tips and brown cilia. Halteres yellow.

♀. Similar to ♂ but with eyes separated over face which is violet above and silver pruinose below ; legs not ornamented ; tibia 2 with 3 antero-dorsal, 2 postero-dorsal and 2 antero-ventral bristles ; 2nd segment of hind tarsus twice as long as basitarsus.

Length 3·5 mm.

Holotype ♂, NEPAL : Arun Valley, below Tumlingtar, River Sabhaya, west shore, c. 1800′, evergreen shrubs on sandy shore, 9–17.xii.1961 (*R. L. Coe*).

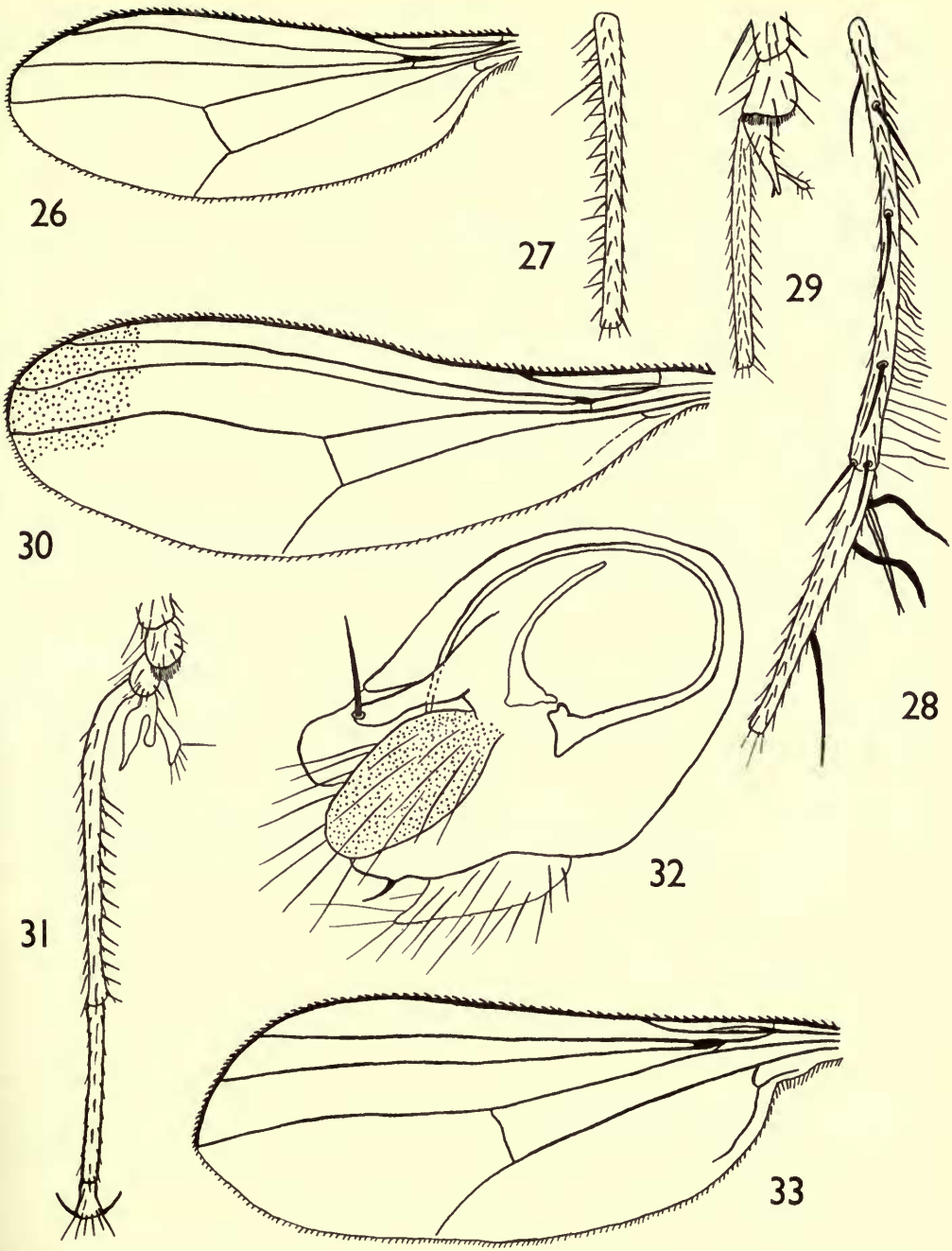
Paratype ♀, east shore of R. Arun below Tumlingtar, c. 1,800′, 14–23.xii.1961, evergreen shrubs bordering dry stream bed (*R. L. Coe*).

This species is close to *maculatus* Parent, 1932, and is in the *apicalis* group, a key to which is given below.

Sympycnus coei sp. n.

(Text-figs. 30, 31)

♂. Frons wide, shining metallic blue-green. Antennae with segments 1 and 2 completely yellow, latter with an apical crown of short bristles ; 3rd segment brown-black, triangular, not longer than wide and bearing a pubescent arista dorsally. Eyes short pale haired, contiguous over most of face. Palpi yellow, proboscis brown. Occiput grey dusted ; postocular cilia uniserial, black above, pale laterally and ventrally.



FIGS. 26–33. *Sympycnus* spp., *S. arunensis* sp. n. 26. ♂ wing. 27. ♂ fore-basitarsus. 28. ♂ mid tibia and basitarsus. 29. ♂ hind tarsal segments 1—3 : *S. coei* sp. n. 30. ♂ wing. 31. ♂ hind tarsus : *S. khola* sp. n. 32. ♂ hypopygium. 33. ♂ wing.

Dorsum of thorax metallic green centrally, broadly yellow at anterior and lateral margins ; acrostical bristles absent, 6 pairs of dorso-central bristles. Scutellum metallic green on disc but with completely yellow margins and bearing 2 strong marginal bristles. Post-scutellum and post-notum with a median longitudinal brown stripe. Pleurae yellow with a dark triangular spot at wing base.

Abdomen with venter completely yellow, tergites triangularly black-brown dorsally except tergite 1 which is completely yellow. Lamellae yellow, pale haired, pointed oval, ventral lobes chitinised.

Legs with coxae yellow, dark bristled. Femora yellow, posterior pair with a few long hairs at the base ventrally and a single pre-apical bristle. Leg 1—tibia yellow, without bristles ; tarsus not ornamented, basitarsus as long as tibia and as long as following tarsal segments together. Leg 2—tibia yellow with 3 antero-dorsal, 1 postero-dorsal and 2 ventral bristles ; basitarsus yellow and as long as following tarsal segments together, these being darker. Leg 3—tibia yellow with no long bristles although all bristles are slightly longer than those on the anterior and middle legs ; basitarsus yellow, very short and with 2 long, pale hairs ventrally, 2nd tarsal segment shorter than basitarsus and with a bilobed ventral appendage, 3rd tarsal segment longer than segments 4 and 5 together and with a ventral row of short bristles, tarsal segments 4 and 5 brownish, the 4th four times as long as the 5th.

Wings as long as fly, anal corner not developed ; hyaline but with an apical brown spot ; posterior cross-vein shorter than apical section of 5th vein. Squamae pale with dark tips and brown cilia Halteres yellow.

♀. Similar to ♂ but eyes separated over face which is silver pruinose (brown from below) ; hind tarsus simple, with 2nd segment twice as long as basitarsus and almost twice as long as 3rd segment ; wings without apical brown spot.

Length 4–4·5 mm.

Holotype ♂, NEPAL : Taplejung Distr., Sangu, c. 6,200′, mixed vegetation by stream in gully, xi.1961–i.1962 (*R. L. Coe*).

Paratypes 25 ♂, 27 ♀, same data as Holotype ; 2 ♂, 4 ♀, above Sangu, mixed vegetation in dried up ravine, c. 6,800′, 16.ii.1962 ; 1 ♀, edge of mixed forest above Sangu, c. 6,500′, 17.x–1.xi.1961 ; 1 ♀, below Sangu, c. 4,000′, mixed vegetation on sheltered slopes above river, 3.i.1962 ; 1 ♀, Dobhan, east bank of River Tamur, c. 3,500′, mixed vegetation by stream in deep gully, i–ii.1962 (*R. L. Coe*).

Four paratypes (2 ♂, 2 ♀) bearing same data as Holotype are deposited in the Zoölogisch Museum, Amsterdam.

S. coei sp. n. clearly belongs to the *apicalis* group, the species of which may be separated by the following key :—

KEY TO *apicalis* GROUP OF *Sympycnus*

1	Antennae completely yellow	***gummigutti*** Becker
–	Antennae partly, or completely dark	2
2	Antennae completely black ; acrostical bristles uniserial ; in ♂ wings with 3 small, dark spots apically, legs 1 and 3 ornamented . .	***thienemanni*** (Stackelberg 1931)
–	Antennae in part yellow ; acrostical bristles biserial or absent	3
3	Acrosticals biserial	4
–	Acrosticals absent	5
4	3rd antennal segment twice as long as broad ; dorsum of thorax broadly green ; in ♂ tibia 2 without special hairs or bristles	***acuticornis*** Frey
–	3rd antennal segment as long as broad ; dorsum of thorax narrowly green ; in ♂ tibia 2 with a complete row of special hairs ventrally	***arunensis*** sp. n.

5 Wing with an apical brown spot (♂) 7
– Wing clear hyaline (♀) 6
6 Posterior cross-vein shorter than apical section of 5th vein . . ***coei*** sp. n. ♀
– Posterior cross-vein as long as apical section of 5th vein . . ***apicalis*** de Meijere ♀
7 All pairs of legs modified in some way ; posterior cross-vein as long as apical section of 5th vein 8
– Only hind leg modified ; posterior cross-vein shorter than apical section of 5th vein ***coei*** sp. n. ♂
8 Tibia 2 without longer hairs at the base ventrally ; tibia 3 ventrally with 4 sub-apical hairs standing at 90° to tibia . . . . . ***apicalis*** de Meijere ♂
– Tibia 2 with longer hairs at the base ventrally ; tibia 3 without hairs ventrally ***maculatus*** Parent ♂

Sympycnus khola sp. n.

(Text-figs. 32, 33)

♂. Frons shining metallic green, weakly grey dusted. Antennae brown-black ; 3rd segment triangular, not longer than wide and bearing a pubescent arista dorsally. Face narrow, silver pruinose but appearing black from front. Proboscis and palpi brown. Eyes short pale haired, narrowly separated over face.

Dorsum of thorax shining metallic blue-violet, yellow on anterior and lateral margins ; acrostical bristles biserial, 6 pairs of dorso-centrals. Scutellum blue-violet on disc but yellow at margins and bearing 2 strong marginal bristles. Pleurae mainly yellow, pteropleura with a dark spot below squamae, metapleura brown.

Abdomen with venter yellow, segments 1–4 brown-black laterally and dorsally, segment 5 and hypopygium yellow ; latter enclosed ; lamellae yellow, lateral appendages chitinised.

Legs with coxae yellow, dark bristled, middle pair with a dark spot externally in the postero-basal corner, hind pair with 1 external bristle. Femora yellow, middle and posterior pairs with single external bristles. Leg 1—tibia yellow, without bristles ; basitarsus yellow and as long as tarsal segments 2 and 3 together, segments 2–5 brown. Leg 2—tibia yellow with 3 antero-dorsal, 2 postero-dorsal, 2 antero-ventral and 1 postero-ventral ; tarsus yellow-brown, simple. Leg 3—tibia yellow with 1 antero-dorsal, 2 postero-dorsal and 3 short ventral bristles ; basitarsus yellow and shorter than segment 2 which is simple, segments 2–5 brownish.

Wings hyaline ; 3rd and 4th veins slightly divergent ; apical section of 5th vein not twice as long as posterior cross-vein. Squamae pale with brown cilia. Halteres pale yellow.

♀. Similar to ♂.

Length 2 mm.

Holotype ♂, NEPAL : Taplejung Distr., between Sangu and Tamrang, x–xi.1961, mixed shrubs in deep gorge, c. 5,200′ (*R. L. Coe*).

Paratypes 1 ♂, same data as Holotype ; 1 ♀, mixed plants by damp cliff in deep river gorge, c. 5,200′, i–ii.1962 (*R. L. Coe*).

S. laetus Becker, 1922, has a superficial resemblance to *khola* sp. n. but differs in that the 1st and 2nd antennal segments are yellow and, in the ♂, the hind tarsus is slightly modified.

Sympycnus gauri sp. n.

(Text-fig. 34)

♂. Frons shining metallic blue-violet. Antennae completely black ; 3rd segment triangular, longer than wide and bearing a pubescent arista dorsally. Eyes short pale haired, contiguous over face. Palpi and proboscis dark.

Dorsum of thorax metallic green ; acrostical bristles irregularly uniserial, 5 pairs of dorso-centrals. Scutellum concolorous with dorsum with 2 strong marginal bristles. Pleurae metallic green-black, grey dusted.

Abdomen mainly metallic green, 1st segment yellow basally. Hypopygium enclosed.

Legs with coxae dark, pale at tips, dark bristled, posterior pair with 1 bristle externally. Femora mainly dark but pale basally and apically, anterior and middle pairs with ventral fringes of long, dark hairs. Leg 1—simple, yellow-brown, tibia without bristles or hairs. Leg 2—tibia yellow with 2 antero-dorsal, 1 postero dorsal and no ventral bristles ; tarsus brown, simple. Leg 3—tibia yellow with 1 antero-dorsal, 2 postero-dorsal and no ventral bristles ; tarsus simple, basitarsus yellow, shorter than segment 2, segments 2–5 brown.

Wings hyaline ; 3rd and 4th veins parallel, apical section of 5th vein almost twice as long as posterior cross-vein. Squamae brown, cilia black. Halteres pale yellow.

♀. Unknown.

Holotype ♂, NEPAL : Taplejung Distr., river banks below Tamrang Bridge, c. 5,500′, x–xi.1961 (*R. L. Coe*).

Paratype ♂, same data as Holotype.

This species is similar to *residuus* Becker, 1922, described from Formosa, but the latter species may be distinguished by the absence of acrostical bristles, yellow coxae and femora, the latter without ventral hair fringes, and the relatively shorter posterior cross-vein.

Sympycnus albipes nepalensis subsp. n.

(Text-figs. 35–37)

Sympycnus albipes Lamb, 1926 : 548, figs. 7–10.

♂. Frons shining metallic blue-green, weakly pale dusted. Antennae mainly brown-black ; 3rd segment yellowish at base, triangular, not longer than wide and bearing a pubescent arista dorsally. Eyes short pale haired, contiguous over face. Palpi and proboscis yellow. Occiput grey dusted ; post-ocular cilia uniserial, black.

Dorsum of thorax shining metallic green, acrostical bristles uniserial, 6 pairs of dorso-centrals. Scutellum metallic green on disc but lateral and posterior margins broadly yellow, bearing 2 strong marginal bristles. Pleurae metallic green above, yellowish below.

Abdomen with 1st segment green, 2nd segment yellow, remaining segments and hypopygium green.

Legs with coxae yellow, dark bristled, posterior pair with a single bristle externally. Femora yellow, anterior pair with a few scattered long hairs ventrally, posterior pair with single pre-apical bristles. Leg 1—tibia yellow, without bristles but with a row of 5–6 long hairs ventrally in the apical half ; basitarsus yellow, longer than following segment and with a row of short hairs ventrally, 2nd segment brown, longer than 3rd segment which is as long as segments 4 and 5 together, 4th segment with some long hairs dorsally, 4th and 5th segments whitish. Leg 2—tibia yellow with 2 weak antero-dorsal and 3 weak ventral bristles ; basitarsus yellow, following tarsal segments brown. Leg 3—tibia mainly yellow, broadly brown apically, with 2 antero-dorsal, 1 postero-dorsal and no ventral bristles ; tarsus brown, basitarsus short with 1 bristle ventro-medially, 2nd segment shorter than basitarsus and with a long, thin, apico-ventral lobe, 3rd segment longer than segments 4 and 5 together.

Wings hyaline ; 3rd and 4th veins parallel apically, apical section of 5th vein over twice as long as posterior cross-vein, anal vein weak. Squamae pale, cilia dark. Halteres yellow.

♀. Similar to ♂ but with eyes separated over face which is blackish ; legs simple, 2nd segment of hind tarsus longer than basitarsus.

Length 2–2·5 mm.

Holotype ♂, NEPAL : Arun Valley, east shore of R. Arun below Tumlingtar, c. 1,800′, 14–23.xii.1961, evergreen shrubs bordering dry stream-beds (*R. L. Coe*).

Paratypes 1 ♂, same data as Holotype ; 1 ♀, above River Sabhaya, east shore, swept from dwarf bamboos in deep ravine, c. 2,000′, 12.xii.1961 (*R. L. Coe*).

S. albipes albipes Lamb, 1926, was described from Rodriguez Island and recorded from the Seychelles and Ceylon. The new subspecies may be separated from it by the following points :– partly yellow antennae, fewer and longer acrostical bristles, much less darkened hind tibial tip and, in the ♂, the more numerous and shorter ventral hairs on the fore-tibia.

In Becker's key, 1922, to the Oriental species of *Sympycnus* both subspecies will run to *strenuus* Becker, 1922, but this species has a reddish 3rd antennal segment and an unmodified fore-tibia and tarsus.

Sympycnus peniculitarsus sp. n.

(Text-fig. 38)

♂. Frons one-third width of head, shining metallic green-blue, weakly pale dusted. Antennae with first and second segments black ; segment 3 brownish yellow, triangular, not longer than wide and bearing a pubescent arista dorsally. Eyes short pale haired, contiguous over face. Palpi and proboscis dark. Occiput grey ; post-ocular cilia uniserial, black above, pale laterally and ventrally.

Dorsum of thorax shining metallic green with bluish and bronze tinges ; acrostical bristles uniserial, 5 pairs of dorso-centrals. Scutellum concolorous with dorsum with 2 strong marginal bristles. Pleurae metallic green, grey dusted.

Abdomen mainly green-black, segment 2 and anterior margin of segment 3 yellow dorsally, segments 3 and 4 yellow ventrally. Hypopygium enclosed.

Legs with coxae pale, dark bristled, posterior pair with 1 bristle externally. Femora yellow, middle and posterior pairs with single pre-apical bristles, posterior pair dark at tip. Leg 1—tibia yellow, without bristles but with a complete ventral fringe of pale hairs ; tarsus yellow, 2nd segment with a ventral extension in basal two-thirds forming a notch in which is situated a group of short, chitinised hairs. Leg 2—tibia yellow, with 3 antero-dorsal, 1 postero-dorsal, 1 antero-ventral and no postero-ventral bristles ; tarsus brown, simple. Leg 3—tibia yellow, with 3 antero-dorsal, 2 postero-dorsal and 1–2 short ventral bristles ; tarsus brown, simple, basitarsus shorter than following segment.

Wings hyaline ; 3rd and 4th veins parallel apically, apical section of 5th vein almost 3 times as long as posterior cross-vein, anal vein weak. Squamae pale, cilia dark. Halteres yellow.

♀. Similar to ♂ but with eyes separated over face and simple fore-leg.

Length 1·5–2 mm.

Holotype ♂, NEPAL : Arun Valley, below Tumlingtar, River Sabhaya, west shore, c. 1,800′, evergreen shrubs on sandy shore, 9–17.xii.1961 (*R. L. Coe*).

Paratypes 3 ♂, same data as Holotype ; 13 ♂, 9 ♀, above R. Sabhaya, east shore, swept from dwarf bamboos in deep ravine, c. 2,000′, 12.xii.1961 ; 20 ♂, 17 ♀, east shore of R. Arun below Tumlingtar, c. 1,800′, 14–23.xii.1961, evergreen shrubs bordering dry stream-beds (2 ♂ and 2 ♀ of this series deposited in the Zoölogisch Museum, Amsterdam) ; 2 ♂, 4 ♀, swept from *Ricinus communis* L., 23.xii.1961 ; 13 ♂, 24 ♀, Taplejung Distr., below Sangu, c. 4,000′, mixed vegetation on sheltered slopes above river, 3.i.1962 (2 ♂ and 2 ♀ of this series are deposited in the Entomological Institute, Hokkaido University, Sapporo) ; 3 ♀, shady places on shrubby

slope above R. Tamur, 21–27.i.1962 ; 1 ♂, 3 ♀, Dobhan, c. 3,500′, mixed vegetation in dry gully on wooded slope, 29.i.1962 ; 1 ♂, 1 ♀, evergreen trees overhanging stream in deep gully, 30.i.1962 ; 8 ♂, 11 ♀, east bank of River Tamur, c. 3,500′, mixed vegetation by stream in deep gully, i–ii.1962 (*R. L. Coe*).

S. turbidus Becker, 1922, is close to *peniculitarsus* sp. n. but may be distinguished from the latter by its black 3rd antennal segment, hind tibia with 3 ventral bristles and, in the ♂, the simple fore-leg.

Sympycnus takagii sp. n.

(Text-figs. 39, 40)

♂. Frons metallic blue-violet, grey dusted. Antennae black ; 3rd segment triangular, almost twice as long as wide, long haired and bearing a pubescent arista dorsally. Face very wide, half width of frons, metallic green but heavily grey dusted. Palpi and proboscis dark. Eyes short pale haired, widely separated below antennae. Occiput grey ; post-ocular cilia uniserial, black above, pale laterally and ventrally.

Dorsum of thorax metallic blue-green, heavily yellow-brown dusted ; acrostical bristles absent, 5 pairs of dorso-centrals. Scutellum concolorous with dorsum with 2 strong marginal bristles. Pleurae metallic green, grey dusted.

Abdomen long, completely metallic green, hypopygium enclosed.

Legs with anterior coxae yellow, dark bristled ; middle and posterior pairs dark, pale at tips, hind pair with single bristles externally. Femora yellow, posterior pair darkened dorsally in the apical half. Leg 1—tibia yellow, without bristles ; basitarsus yellow, following tarsal segments brown. Leg 2—tibia yellow with 2 antero-dorsal and 1 antero-ventral bristle ; tarsus yellow-brown. Leg 3—tibia yellow with 1 antero-dorsal, 3 postero-dorsal and 3 short ventral bristles ; tarsus brown, basitarsus shorter than following segment.

Wings pale brown hyaline ; 3rd and 4th veins parallel in their apical sections, apical section of 5th vein over twice as long as posterior cross-vein, anal vein weak. Squamae and cilia brown. Halteres brown.

♀. Unknown.

Length 2 mm.

Holotype ♂, NEPAL : Taplejung Distr., Sangu, c. 6,200′, mixed vegetation by stream in gully, xi.1961–i.1962 (*R. L. Coe*).

Paratype ♂, same data as Holotype.

This species is distinct from other Oriental species of *Sympycnus* by virtue of the extremely wide face in the ♂. *S. residuus* Becker, 1922, described from Formosa, is perhaps closest but may be separated by the completely yellow coxae, the relatively shorter 3rd antennal segment and the narrower face in the ♂.

Sympycnus pahar sp. n.

(Text-fig. 41)

♂. Frons metallic blue-violet, grey dusted. Antennae with segments 1 and 2 black ; 3rd segment brown, triangular, as long as wide and bearing a pubescent arista dorsally. Face narrow, dark. Palpi and proboscis dark. Eyes short pale haired, narrowly separated over face. Occiput grey ; post-ocular cilia uniserial, black dorsally, pale laterally and ventrally.

Dorsum of thorax metallic green, heavily grey dusted and with a median longitudinal brown stripe ; acrostical bristles absent, 5 pairs of dorso-centrals. Scutellum concolorous with

dorsum with margins narrowly yellow and bearing 2 strong bristles. Pleurae metallic green-black, grey dusted.

Abdomen long, metallic green-black. Hypopygium enclosed.

Legs with anterior coxae pale, dark at tips and with dark bristles ; middle and posterior coxae dark, pale at tips, posterior pair with 1 external bristle. Femora yellow, hind pair without pre-apical bristles. Leg 1—tibia yellow, without bristles ; tarsus yellow. Leg 2—tibia yellow with 2 antero-dorsal, 1 postero-dorsal and no ventral bristles ; tarsus simple, yellow. Leg 3—tibia yellow with 2 postero-dorsal and 3 short ventral bristles ; tarsus brown, basitarsus shorter than following tarsal segment.

Wings hyaline ; 2nd and 3rd veins strongly divergent, 3rd and 4th veins parallel in their apical sections, apical section of 5th vein over twice as long as posterior cross-vein, anal vein weak. Squamae and cilia brown. Halteres yellow.

♀. Similar to ♂ but with wider face.

Length 2 mm.

Holotype ♂, NEPAL : Taplejung Distr., Sangu, c. 6,200′, mixed vegetation by stream in gully, xi.1961–i.1962 (*R. L. Coe*).

Paratypes 1 ♂, same data as Holotype ; 1 ♂, below Sangu, by stream in shady ravine, c. 6,000′, 30.x.1961 ; 1♀, between Sangu and Tamrang, mixed plants by damp cliff in deep river gorge, c. 5,200′, 22.xi.1961 (*R. L. Coe*).

This species is close to *takagii* sp. n. from which it may be distinguished by the completely yellow hind femur and, in the ♂, the narrower face and shorter 3rd antennal segment.

KEY TO NEPALESE SPECIES OF *Sympycnus*

1 Thorax with pleurae and sides of dorsum broadly yellow 2
– Dorsum of thorax completely metallic green 6
2 Antennae completely dark ; acrostical bristles biserial ; in ♂ legs simple ***khola*** sp. n.
– Antennae at least in part yellow ; in ♂ at least hind basitarsus modified . . 3
3 Antennae completely yellow ; in ♂ fore-tibia with a hair-like bristle apically ***gummigutti*** Beck
– Antennae with 1 or more segments dark 4
4 Acrostical bristles present and biserial 5
– Acrostical bristles absent ; abdomen with segments triangularly black dorsally ; ♂ wing with apical brown spot and only hind basitarsus modified . . . ***coei*** sp. n.
5 Abdomen mainly yellow ; 3rd and 4th wing veins slightly convergent ; posterior cross-vein as long as apical section of 5th vein ; in ♂ all pairs of legs ornamented ***arunensis*** sp. n.
– Abdomen mainly brown ; 3rd and 4th long veins parallel ; apical section of 5th vein twice as long as posterior cross-vein ; in ♂ only hind basitarsus slightly modified ***laetus*** Beck
6 All coxae dark, femora dark ; acrostical bristles irregularly uniserial ; in ♂ anterior and middle femora with long hairs ventrally . . . . . ***gauri*** sp. n.
– At least anterior coxae pale 7
7 Only anterior coxae pale ; acrostical bristles absent ; in ♂ face wide . . 8
– All coxae pale ; acrostical bristles present 9
8 3rd antennal segment much longer than wide ; hind femora brown in apical half dorsally ; anterior coxae completely yellow . . . . . ***takagii*** sp. n.
– 3rd antennal segment not longer than wide ; hind femora completely yellow ; anterior coxae darkened at tips . . . . . ***pahar*** sp. n.
9 Scutellum broadly yellow around posterior margin ; in ♂ fore-tibia with long hairs ventrally and posterior basitarsus modified . . ***albipes nepalensis*** subsp. n.

– Scutellum completely green ; in ♂ fore-tibia and posterior basitarsus simple . 10

10 Hind tibia with 1–2 ventral bristles ; in ♂ 2nd tarsal segment of fore-leg with basal two-thirds extended ventrally and forming a notch which carries a brush of short, stout hairs . . . . . ***penicultarsus*** sp. n.

– Hind tibia with 3 ventral bristles ; in ♂ fore-tarsus simple . . ***turbidus*** Beck

Chrysotimus anomalicerus sp. n.

(Text-figs. 42–44)

♂. Frons wide, metallic blue-green, weakly pale dusted. Antennae with segments 1 and 2 yellow, former bare above, latter with an apical crown of short bristles ; 3rd segment brown-black, long haired, rounded basally and with elongate apical region, forming an appendage which is thicker and longer than arista ; latter short, only as long as width of frons and borne dorsally on 3rd antennal segment. Face narrow, silver dusted. Palpi and proboscis pale. Eyes short pubescent, narrowly separated over face. Head bristles yellow, 1 pair of orbitals, 1 pair of inter-ocellars, post-ocular cilia uniserial.

Dorsum of thorax shining metallic green, pale dusted. Bristles yellow, acrostical bristles uniserial, 5 pairs of dorso-centrals. Scutellum concolorous with dorsum with 2 strong marginal bristles. Pleurae metallic blue-green, grey dusted.

Abdomen metallic green, evenly short, pale bristled. Hypopygium enclosed.

Legs completely yellow, yellow bristled. Posterior coxae with a single external bristle. Femora without bristles. Leg 1—tibia without bristles ; basitarsus shorter than tibia but as long as tarsal segments 2 and 3 together. Leg 2—tibia with 2 antero-dorsal, 1 postero-dorsal, no ventral bristles and a crown of bristles apically ; tarsus simple. Leg 3—tibia with rows of short dorsal and ventral bristles ; basitarsus shorter than segment 2.

Wings hyaline, pointed at tip ; 3rd and 4th veins slightly divergent, apical section of 5th vein over twice as long as posterior cross-vein, anal vein weak. Squamae and cilia pale. Halteres yellow.

♀. Similar to ♂ but with short 3rd antennal segment, longer arista and wider face.

Length 2 mm.

Holotype ♂, NEPAL : Taplejung Distr., below Sangu, by stream in shady ravine, c. 6,000′, 30.x.1961 (*R. L. Coe*).

Paratype ♀, Sangu, c. 6,200′, mixed vegetation by stream in gully, ix–x.1961 (*R. L. Coe*).

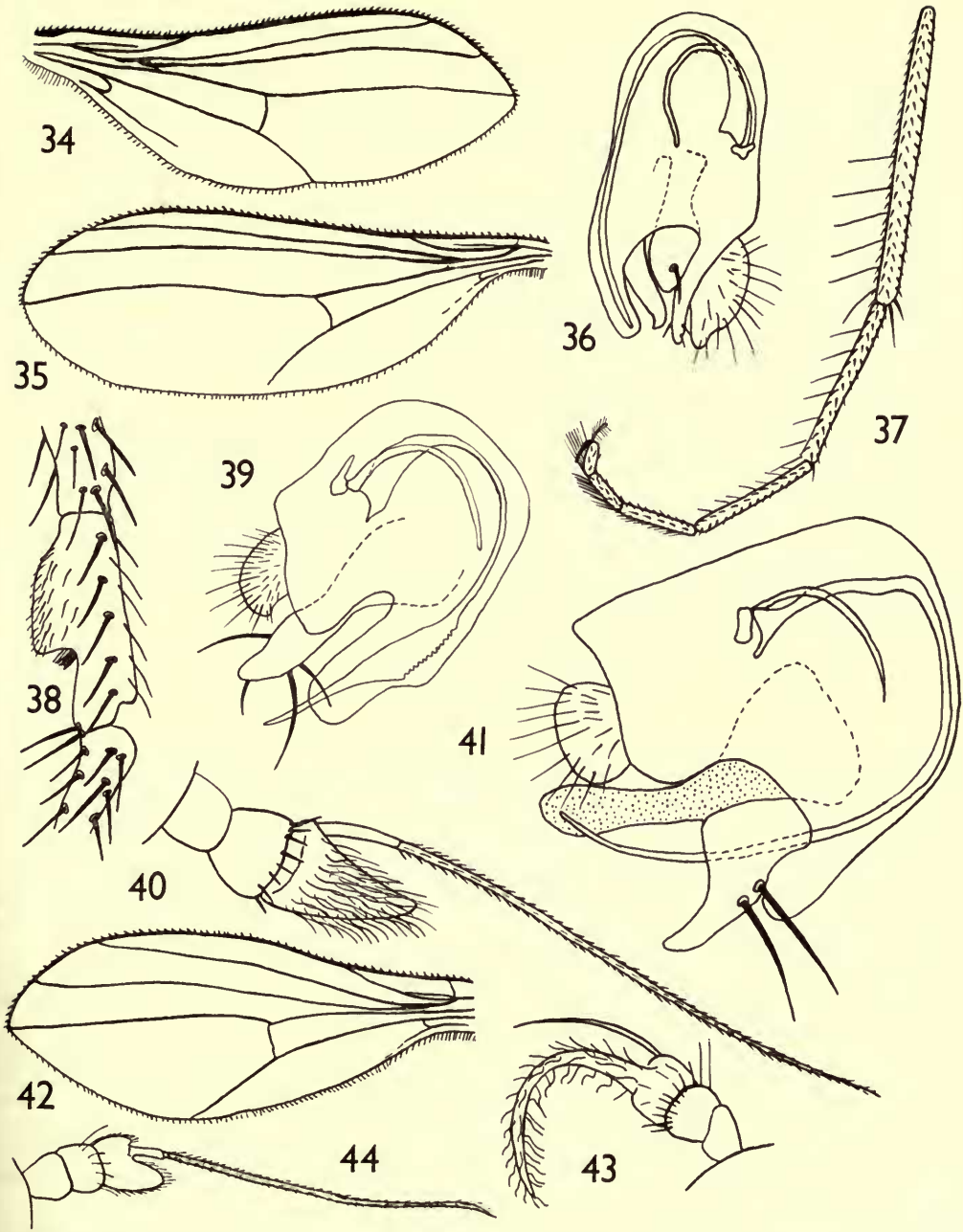
This species is only tentatively placed in the genus *Chrysotimus* as it differs from other known species in the extraordinary form of the 3rd antennal segment in the ♂. This structure is very similar to that of a few species in the South American genus *Kophosoma* van Duzee, 1926.

There are no previous records of *Chrysotimus* occurring in the Oriental region and the well defined uniserial acrostical bristles and the absence of yellow coloration in *anomalicerus* sp. n. render it unlike the known Palaearctic species of the genus.

NEPALOMYIA gen. n.

(Text-figs. 45–48)

Head higher than wide ; frons wide ; 1 pair of orbital bristles and 1 pair of inter-ocellar bristles, both pairs well developed ; post-vertical bristles not developed ; post-ocular bristles uniserial. Antennae placed above middle of head profile, shorter than head ; 1st segment short, bare above ; 2nd segment short, transverse, and with a crown of apical bristles ; 3rd segment



FIGS. 34–44. *Sympycnus gauri* sp. n. 34. ♂ wing : *S. albipes nepalensis* subsp. n. 35. ♂ wing. 36. ♂ hypopygium. 37. ♂ fore-tibia and tarsus : *S. peniculitarsus* sp. n. 38. ♂ 2nd segment of fore-tarsus : *S. takagii* sp. n. 39. ♂ hypopygium. 40. ♂ antenna : *S. pahar* sp. n. 41. ♂ hypopygium : *Chrysotimus anomalicerus* sp. n. 42. ♂ wing. 43. ♂ antenna. 44. ♀ antenna.

triangular, as long as wide and bearing a pubescent arista dorsally. Face wide in both sexes, with an incomplete transverse division and not reaching to lower eye margins. Eyes short haired. Palpi and proboscis well developed. Occiput concave.

Thorax longer than wide with a well developed pre-scutellar flattening in posterior third ; acrostical bristles biserial, 5 pairs of dorso-centrals, 1 prothoracic, 1 humeral, 1 internal post-humeral, 2 notopleurals, 1 weak sutural, 2 supra-alars and 1 post-alar. Scutellum semicircular with 2 strong marginal bristles.

Abdomen long with 5 unmodified segments, only tergite 1 with longer posterior marginal bristles ; hypopygium sessile but not enclosed, highly complex.

Legs long and fragile, bristles weak. Posterior coxa with a single external bristle. Femur 3 with or without pre-apical bristles. Tibia 2 with an apical crown of bristles. Posterior basitarsus shorter than following tarsal segment.

Wings with 2nd and 3rd veins divergent, 3rd and 4th veins parallel, posterior cross-vein slightly before middle of wing and shorter than apical section of 5th vein, anal vein present and reaching almost to posterior wing margin.

Type species :— *Nepalomyia dytei* sp. n.

The affinities of this genus are obscure but probably the closest known genus is *Xanthochlorus* Loew, 1857. The two genera show some similarities especially in the form and complexity of the ♂ genitalia (see Becker, 1918 : 129).

Xanthochlorus differs from *Nepalomyia* in the following characters :— a basal arista, absence of acrostical bristles, hind basitarsus longer than the following tarsal segment and reduction or absence of the anal vein.

N. dytei sp. n.

(Text-figs. 45, 46)

♂. Frons about one-third width of head, dark green, grey dusted. Antennae black ; 1st segment short, bare above ; 2nd segment shorter than 1st and with a crown of apical bristles ; 3rd segment triangular, as long as wide and bearing a pubescent arista dorsally. Face half width of frons, concave except above mouthparts, metallic green and grey dusted and with an incomplete transverse division. Palpi and proboscis black. Occiput concave, dark metallic green ; post-ocular bristles black and uniserial ; post-verticals not developed.

Dorsum of thorax metallic green, grey dusted, with a well developed pre-scutellar flattening in posterior third ; acrostical bristles biserial, 5 pairs of dorso-centrals. Scutellum concolorous with dorsum with 2 strong marginal bristles. Pleurae metallic green, grey dusted.

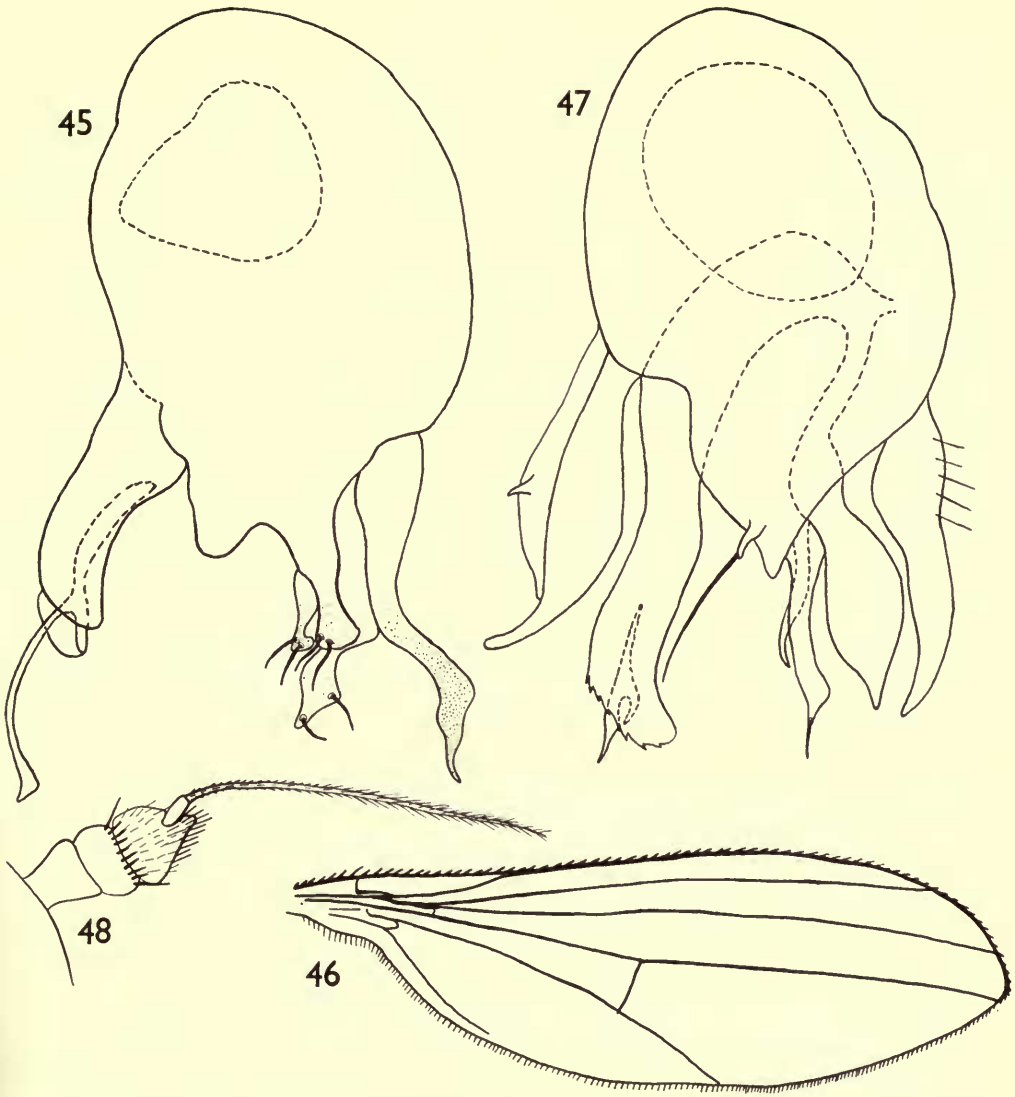
Abdomen dark metallic green, grey dusted ; evenly short bristled but 1st tergite with longer posterior marginal bristles. Hypopygium large, sessile but free ; appendages chitinised at tip, dorsal pair with hooked tips.

Legs mainly brown, only trochanters yellow. Posterior coxae with single external bristles. Posterior femora with or without pre-apical bristles. Leg 1—tibia without bristles ; basitarsus as long as tibia, 2nd tarsal segment shorter than basitarsus but longer than 3rd segment, latter longer than segments 4 and 5 together, these being of equal length. Leg 2—tibia with 2 antero-dorsal, 2 postero-dorsal and no ventral bristles ; basitarsus shorter than tibia but as long as segments 2 and 3 together. Leg 3—tibia with 1 antero-dorsal, 1 postero-dorsal and no ventral bristles ; basitarsus two-thirds length of following segment.

Wings very pale brown hyaline ; 2nd and 3rd veins divergent, 3rd and 4th veins parallel apically, posterior cross-vein three-fifths length of apical section of 5th vein, anal vein complete almost to posterior wing margin. Squamae brown, cilia black. Halteres pale yellow.

♀. Similar to ♂ but fore-basitarsus shorter than tibia and the 4th and 5th segments of the fore-tarsus are as long as the 3rd segment.

Length 2·5–3 mm.



FIGS. 45–48. *Nepalomyia* spp., *N. dytei* sp. n. 45. ♂ hypopygium. 46. ♂ wing : *N. confusa* sp. n. 47. ♂ hypopygium. 48. ♂ antenna.

Holotype ♂, NEPAL : Taplejung Distr., between Sangu and Tamrang, spray-splashed rocks in deep gorge, c. 5,200′, 6–28.xi.1961 (*R. L. Coe*).

Paratypes 2 ♂, 7 ♀, same data as Holotype ; 4 ♀, 1–14.ii.1962 ; 1 ♂, mixed plants by damp cliff in deep river gorge, c. 5,200′, 22.xi.1961 ; 1 ♀, x–xi.1961, mixed shrubs in deep gorge, c. 5,200 (*R. L. Coe*).

(2 ♀, bearing same data as Holotype, deposited in the Zoölogisch Museum, Amsterdam).

This species is defined in the key below.

N. confusa sp. n.

(Text-figs. 47, 48)

♂. Frons one-third width of head, dark green. Antennae yellow-brown ; 1st segment short, bare above ; 2nd segment shorter than 1st and with a crown of apical bristles ; 3rd segment triangular, as long as wide and bearing a pubescent arista dorsally. Face one-third width of frons, dark metallic green, flat with an incomplete transverse division. Palpi and proboscis black. Eyes short haired. Occiput dark, shining ; post-ocular bristles black, uniserial ; post-verticals not developed.

Dorsum of thorax green-brown, posterior calli and lateral margins of scutellum yellowish ; pre-scutellar flattening well developed ; acrostical bristles biserial, 5 pairs of dorso-centrals. Pleurae metallic green, grey dusted.

Abdomen brownish-green, venter yellow ; tergites evenly short bristled but tergite 1 with longer posterior marginal bristles. Hypopygium large, sessile but free, appendages not chitinised, dorsal pair not hooked.

Legs mainly yellow, only mid and posterior coxae brown in basal two-thirds. Coxae dark bristled, posterior pair with single external bristles. Femora short haired, posterior pair without pre-apical bristles. Leg 1—tibia without bristles ; basitarsus shorter than tibia, tarsal segments of decreasing lengths, segment 4 longer than segment 5. Leg 2—tibia with 2 antero-dorsal, 1 postero-dorsal and no ventral bristles ; basitarsus shorter than tibia but as long as segments 2 and 3 together. Leg 3—tibia with 1 antero-dorsal, 1 postero-dorsal, 1 ventral bristle and 1 longer sub-apical bristle externally ; basitarsus one-third length of 2nd tarsal segment.

Wings hyaline ; 2nd and 3rd veins divergent, 3rd and 4th veins parallel, posterior cross-vein half length of apical section of 5th vein, anal vein complete almost to posterior wing margin. Squamae yellow, cilia black. Halteres pale yellow.

♀. Similar to ♂.

Length 2·5–3 mm.

Holotype ♂, NEPAL : Taplejung Distr., Sangu, c. 6,200′, mixed vegetation by stream in gully, ix–x.1961 (*R. L. Coe*).

Paratype ♀, between Sangu and Tamrang, spray-splashed rocks in deep river gorge, c. 5,200′, 6–28.xi.1961 (*R. L. Coe*).

The two known species of the genus *Nepalomyia* may be distinguished as follows :—

1 Legs mainly brown ; antennae black ; in ♂ anterior leg with basitarsus as long as tibia, tarsal segment 3 longer than segments 4 and 5 together, these being of equal length ; hypopygium with appendages chitinised apically and dorsal pair with hooked tips . . . . . ***dytei*** sp. n.

– Legs mainly yellow ; antennae yellow-brown ; in ♂ anterior leg with basitarsus shorter than tibia, segment 3 slightly longer than segment 4, latter 1½ times as long as segment 5 ; hypopygium with appendages not chitinised and dorsal pair not hooked apically but with a few hairs basally . . . . ***confusa*** sp. n.

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